SECTION 3 - **ORU-2 SYSTEM TANKS**

The following twenty-one (21) tanks are used in the ORU treatment system. Tank numbers listed below coincide with tank numbers provided on the flow diagram in Appendix B. All hazardous waste storage tanks associated with the ORU treatment system are managed in accordance with Standalone #8 – *Bulk Storage Plan*.

Table 22-3: ORU-2 Tank Listing

TANK #	DESCRIPTION	TYPE	CAPACITY (Gal)
RCRA Tanks			
F-1301	Interceptor	Above ground, horizontal, flat bottom, CS	3,000
F-1401	Oil Water Separator	Above ground, horizontal, cone bottom, CS	13,200
F-1402	Process Water Tank	Above ground, vertical, cone bottom, CS	20,000
F-1403	Process Water Mix Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1404	Process Water Mix Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1405	Treated Process Water Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1406	Treated Process Water Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1407	Treated Process Water Tank 3	Above ground, vertical, cone bottom, CS	20,000
F-1408	Treated Process Water Tank 4	Above ground, vertical, cone bottom, CS	20,000
F-1409	Treated Process Water Tank 5	Above ground, vertical, cone bottom, CS	20,000
F-1410	Treated Process Water Tank 6	Above ground, vertical, cone bottom, CS	20,000
F-1411	Treated Process Water Tank 7	Above ground, vertical, cone bottom, CS	20,000
F-1412	Treated Process Water Tank 8	Above ground, vertical, cone bottom, CS	20,000
F-1413	Treated Process Water Tank 9	Above ground, vertical, cone bottom, CS	20,000
F-1414	Treated Process Water Tank 10	Above ground, vertical, cone bottom, CS	20,000
F-1415	Treated Process Water Tank 11	Above ground, vertical, cone bottom, CS	20,000
F-1416	Treated Process Water Tank 12	Above ground, vertical, cone bottom, CS	20,000
ME-1101	Mix Hopper A	Above Ground Mix/Feed Hopper, CS	7,473
ME-1102	Feed Hopper B	Above Ground Feed Hopper	1,742
V-1401A	Sand Filter A	Above Ground Sand Filter A	100
V-1401B	Sand Filter B	Above Ground Sand Filter B	100
V-1402	Carbon Filter	Stainless Steel	3,950
Non-RCRA Tanks			
F-1417	Product Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1418	Product Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1419	Product Tank 3	Above ground, vertical, cone bottom, CS	20,000

SECTION 4 - **SYSTEM SECONDARY CONTAINMENT**

The ORU-2 System containment is made up of 5 separate containment systems as listed below:

Table 22-4: ORU-2 System Containment

Site Plan Identifier	Area Description	Construction	Required Containment	Actual Containment
C	ORU System Equipment	Reinforced Concrete	3,739.3 ft^3	4,101.3 ft^3
B3	Product Tank Storage	Reinforced Concrete	2,948.6 ft^3	3,152.5 ft^3
B2	Process Water Treatment Area	Reinforced Concrete	2,932.1 ft^3	3,502.5 ft^3
B1	Treated Water Storage	Reinforced Concrete	3,433.3 ft^3	6,265.2 ft^3
D	Mixing Hopper Vault	Reinforced Concrete	1,018.4 ft^3	9,781.3 ft^3
A	Truck Offload Area	Reinforced Concrete	120 ft^3	159.8 ft^3

All ORU-2 containment areas are designed to meet the requirements contained in 40 CFR §264.193. 40 CFR §264.193(e)(2) requires that the secondary containment areas be large enough to contain the capacity of the largest tank plus precipitation from a 25-year, 24-hour storm, (refer to Appendix C for containment calculations). All joints in containment slabs are constructed with chemical-resistant waterstops meeting the requirements of 40 CFR §264.193(e)(2)(iii)). The slab is coated with a chemically compatible impermeable coating meeting the requirements of 40 CFR §264.193(e)(2)(iv)). Stormwater collected from the sumps in these containment areas will be pumped to the process water system and ultimately treated through the process water treatment system. The P.E. certification of the containment structures and tanks required by 40 CFR 264.192(b) will be maintained at the facility in the operating record.

SECTION 5 - **ORU-2 OPERATIONS**

5.1 Organic Recovery Unit Contaminated Waste Handling

Following arrival and acceptance of the waste, the wastes are either stored in approved storage areas or fed directly into the treatment system through two feed hoppers in the system.

5.2 Subpart CC Waste Handling

Wastes subject to Subpart CC Level 1 controls will be stored or accepted in roll-off boxes and dump type vehicles may be placed on the slab floor in Containment Building B-5. Wastes subject to Subpart CC Level 2 controls will remain in the Level 2 shipping containers in accordance with Standalone # 9 - *Container Storage Design and Operations Plan* until they are transferred to the ORU-2 outside mixing feed hopper and amended with drying agents as necessary. Wastes with higher moisture contents may also be mixed with dryer materials in the mixing feed hopper or inside Building B-5 to attain appropriated moisture content.

5.3 Subpart FF Waste Handling

CWMNW tracks the facility's Total Annual Benzene (TAB) and it has historically been less than 1 Mg; therefore, CWMNW is not subject to controls in Subpart FF. However, in the event that generators require their specific wastes to be managed under controls, wastes subject to 40 CFR 61, Subpart FF may be handled in controlled containers such as roll off boxes until the material is transferred into the ORU-2 mixing feed hopper. These wastes will be maintained in containers that meet BWON control requirements, and shall be inspected and monitored in order to comply with all related standards. The vapors throughout the ORU feed system are routed through closed-vent systems to control devices, and all the equipment and piping lines are subject to BWON inspection and monitoring requirements.

5.4 Waste Preparation for Organic Recovery

In general, waste preparation improves the ability of the ORU-2 to treat the contaminated waste. This preparation includes specific operations for screen sizing and size reduction that are also dependent on the uniformity, moisture, and liquid content of the incoming contaminated waste.

Screening (vibrating or non-vibrating) is a primary operation, and wastes are screened or strained to remove debris. Blending low and high concentration waste or high and low boiling point wastes optimizes the operation and reduces problems in liquids recovery.

5.5 Organic Recovery Unit Treatment Capacity ORU-2

The indirect-fired ATDU has an ultimate design capacity of 30 million British thermal units (30 MMBtu), and a theoretical heat transfer efficiency of 60-percent. The temperature capacity of the system is 1,200°F. The actual operating temperatures vary depending upon the boiling points of the organic constituents being extracted such that optimal fuel consumption is maintained.

The theoretical treatment capacity of the system (tons/hour) depends primarily upon the moisture content of the waste and the thermal capacity of the ATDU. Appendix D provides the estimated treatment capacity of the system running at 900° F, based upon the moisture content of incoming waste, and using a thermal transfer efficiency of 60-percent.

SECTION 6 - **ORU-2 REGULATORY STANDARDS**

6.1 Organic Recovery Unit - 40 CFR Part 264 Subparts J/X Compliance

6.1.1 40 CFR Part 264, Subpart J Compliance

The ORU contains process water tanks that store and/or treat hazardous waste and are subject to 40 CFR Part 264, Subpart J. These tanks are managed in compliance with Standalone #8 - *Bulk Storage Plan*, which contains requirements for inspection and operation of these tanks. The hazardous waste storage tank systems in both of the ORU systems have been adequately designed, have sufficient structural integrity, and are acceptable for storing hazardous waste. Required engineer's certifications are contained in Standalone #8 - *Bulk Storage Plan*. Further, the tanks are provided with sufficient secondary containment meeting the requirements of 40 CFR 264.193. Containment calculations for the system are shown in Appendix C. All tanks associated with the ORU are included in Standalone #8 - *Bulk Storage Plan*, which includes all permitted RCRA tanks at the facility.

In the event of any leak or spill from a tank system or secondary containment system, the facility shall comply with response requirements per 40 CFR 264.196. Closure and post-closure care of the hazardous waste tank systems are discussed in Standalone #5 – *Closure/Post-Closure Plan*.

6.1.2 40 CFR Part 264, Subpart X Compliance

The ORU-2 treatment system contains a thermal desorption unit (TDU) and shaker screen equipment that is subject to 40 CFR Part 264, Subpart X. These miscellaneous units are most similar to tank systems; and thus, the applicable and appropriate provisions of 40 CFR Part 264, Subpart J shall be complied with to ensure protection of human health and the environment. Standalone #23 – Subpart X units includes these pieces of equipment.

6.2 Routine Tank Inspections

The elements and frequency of routine inspections of ORU-2 systems hazardous waste tanks, piping and containment are included in Standalone #3 - *Inspection Plan*. The tanks and piping shall be inspected for visible leaks and general condition. The overfill alarm systems shall be tested to insure they are in working order. The containment area and sumps shall be inspected for evidence of any liquid collection and evidence of any leakage from the associated pipes, pumps, tanks and equipment contained within the area. An inspection form for both the ORU systems tanks, piping and containment is contained in Standalone #3 - *Inspection Plan*.

6.3 RCRA Subparts AA, BB and CC and Benzene NESHAPS - Applicability and Compliance for Organic Recovery Systems

6.3.1 40 CFR Part 264, Subpart AA Applicability

40 CFR Part 264, Subpart AA defines the air emission standards for process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations. ORU-2 does not contain any distillation, fractionation, thin-film evaporation, solvent

extraction, or air or steam streaming operation; and thus, 40 CFR Part 264, Subpart AA does not apply to either ORU Treatment system and subsystems.

6.3.2 40 CFR Part 264, Subpart BB Applicability and Compliance

ORU-2 systems are subject to the requirements of 40 CFR Part 270; and thus, all equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight is subject to 40 CFR Part 264, Subpart BB. Compliance requirements for 40 CFR Part 264, Subpart BB is discussed in the Organic Recovery Unit Controls and Monitoring section below

6.3.3 40 CFR Part 264, Subpart CC Applicability

The requirements of 40 CFR Part 264, Subpart CC apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to 40 CFR Part 264, Subparts I, J, or K. As discussed in Section 3.6.1, the ORU does contain hazardous waste storage tanks subject to 40 CFR Part 264, Subpart J; however, per 40 CFR 264.1080(b)(7), the requirements of 40 CFR Part 264, Subpart CC do not apply to a hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63. All hazardous waste storage tanks in the ORU are equipped with and operate with air emission controls in accordance with 40 CFR Part 61, Subpart FF; and thus, the hazardous waste storage tanks in the ORU are not subject to 40 CFR Part 264, Subpart CC. All 40 CFR Part 264, Subpart CC requirements, if any, are contained in the facilities ACDP Permit.

Subpart CC regulations are applicable to containers which are not handled in accordance with 40 CFR Part 61, Subpart FF, having a design capacity greater than 0.1 m^3 (approximately 26 gallons), and containing hazardous waste that has an average volatile organic (VO) concentration greater than 500 ppm by weight (ppmw) at the point of waste generation. Waste received at the facility for ORU treatment will typically arrive or be placed in containers that are larger than the exempted capacity and may contain hazardous waste with VO concentrations greater than 500 ppmw. CWMNW complies with Subpart CC container standards as provided in the Permit and Standalone # 9 - *Container Storage Design and Operations Plan*. In addition, the waste in any container is unloaded in an expedient manner to minimize potential organic air emissions. If, for any reason, unloading of the contaminated waste does not commence immediately, the container is to be kept covered with a lid that meets Subpart CC Level 1 controls. The lid or cover forms a continuous barrier over the entire surface area with no visible cracks, holes, gaps or other open spaces.

6.3.4 40 CFR Part 61, Subpart FF Applicability and Compliance

The ORU at certain times is subject to 40 CFR Part 61, Subpart FF (BWON), since it is part of a facility that intermittently treats, stores, and disposes of BWON wastes from chemical plants and petroleum refineries where the regulation does apply. CWMNW tracks the facility's Total Annual Benzene (TAB), and has historically been less than 1 Mg. Therefore, CWMNW facility is not subject to controls in Subpart FF. However, should the generator require their specific wastes be managed under controls, wastes subject to 40 CFR 61, Subpart FF may be handled in controlled containers such as roll off boxes until the material is loaded into the mixing feed hopper. These wastes shall be maintained in containers that meet BWON control requirements, and shall be

inspected and monitored as to comply with all related standards. The vapors throughout the ORU-2 feed system are routed through closed-vent systems to control devices, and all the equipment and piping lines are subject to BWON inspection and monitoring requirements.

All fixed-roof tanks shall have no detectable emissions in accordance with Method 21 standards and must be closed and sealed unless it is opened for sampling, inspections, maintenance, repair or removal of the waste. All organic vapors that are vented shall be maintained in a closed-vent system that routes to the thermal oxidizer control device.

In instances where the tank is venting to the atmosphere by a pressure relief device, these devices must remain in closed, sealed positions during normal operations. They may be opened if it is necessary to prevent damage or permanent disfiguration to tank, during filling or emptying, or during malfunctions. This follows the alternative standard for tanks under 40 CFR 61.351, allowing tanks handling primarily organic material to have only a pressure relief device.

The oil water separator in the ORU system is vented to the closed vent system and to the thermal oxidizer control device.

SECTION 7 - **ORU-2 CONTROLS AND MONITORING**

The entire ORU-2 unit is centrally-monitored and controlled using a SCADA control package. The computer-based process controls provide graphic screens for effective plant control, monitoring, and data storage. The ORU-2 SCADA control system allow real-time access to all key plant parameters, and records the required operating parameters for compliance with the Part B permit and the ACDP permit. The demonstrated compliance SCADA system records the following parameters:

- Monitoring point CP1 - TDU Flue gas temperature - Deg F
- Monitoring point CP2 - TDU Syngas temperature - Deg F
- Monitoring point CP3 – TDU Infeed rate - TPH
- Monitoring point CP4 - Thermal oxidizer chamber temperature - Deg F
- Monitoring Point CP5 - Thermal oxidizer feed valve position – Open/Closed

The SCADA process controls enable the operator to improve system capacity, optimize fuel consumption, and protect the system against accidental malfunctions. The computerized system includes automatic fail safes for controlled shutdown of the system during upsets.

The process instrumentation and electrical switch gear is housed in a motor control center. The SCADA control system and operators control station is located in the control room south of the thermal processing system. Plant operators are trained in the operational and maintenance aspects of the system and these requirements are contained in Standalone #2 - *Security Procedures, Hazard Prevention, and Training Plan.*

7.1 Control Device Monitoring

The emissions control devices throughout the ORU system require monitoring of several different parameters, and the requirements for these are established in the facilities ACDP permit. The facility shall manage leaks identified by regular inspections in compliance with the requirements in 40 CFR Part 264.1064.

7.2 Tank Monitoring

As indicated in Section 3.6.3, all hazardous waste storage tanks in the ORU-2 system are equipped with and operate with air emission controls in accordance with 40 CFR Part 61, Subpart FF; and thus, the hazardous waste storage tanks in the ORU-2 system are not subject to 40 CFR Part 264, Subpart CC. The facility shall comply with all applicable requirements under 40 CFR Part 61, Subpart FF. All hazardous waste tanks are equipped with a fixed roof cover and shall be visually inspected by the owner and operator quarterly, and monitored via Method 21 annually. If leaks are detected, responses and recordkeeping shall be made in compliance with 40 CFR Part 264, Subpart BB and 40 CFR 264.1064.

7.3 Other Equipment Monitoring

The ORU-2 is in heavy liquid service, and all pumps, valves, and pressure relief devices shall be observed for potential leaks using the following methods: Audible, Visual, and Olfactory (AVO), per 40 CFR Part 264, Subpart BB. There is no stated monitoring frequency for equipment in heavy liquid service according to 40 CFR Part 264, Subpart BB; however, monitoring shall be conducted quarterly consistent with industry best management practices, and to satisfy the BWON quarterly visual inspection requirements. When a leak is discovered, 40 CFR Part 60, Method 21 shall be used to measure the severity.

All sampling stations within ORU-2 system shall be built and kept up to design and installation requirements in order to stay compliant with 40 CFR, Subpart BB. All operational open-ended lines or pipes shall have a cap, plug, or double valve system when not in use.

APPENDIX A
AS-BUILT DESIGN PLANS FOR ORU-2

25-Year, 24-Hour Storm Event 1.5 in

Containment Area Number (see plan)	Area of Containment, A (sq ft)	Depth of Containment, d (ft)	Volume of Containment, V=A x d (cu ft)	Equipment Type	Units of Equipment (includes Future)	Area of Equipment Pad (sq ft)	Volume of Equipment, V_{EQ} (cu ft)	Total Containment Volume Provided, $V_T = V_{CON} - V_{EQ}$ (cu ft)	Rainfall Volume, V_R (cu ft)	Tank Volume, V_T (cu ft)	Required Containment Volume, $V_T + V_R$ (cu ft)	Notes
A	960	0.5	159.8	N/A	0	0	-	159.8	230.0	-	229.0	Volume = (Area x Depth) - Area occupied by concrete incidental rainwater spills only.
B1	6,876	2.33	16,180.8	20k Gal Tanks, Pads	24	172.2	3,955.5	6,225.3	795.7	2,673.6	3,469.3	Assume 6" to 8 Equipment pad plus 12" dia. Less for remainder of containment wall height
B2	2,856	2.33	6,721.4	20k Gal Tanks, Pads	4	172.2	1,315.9	3,502.5	256.5	2,673.6	2,931.1	Assume 6" to 8 Equipment pad plus 12" dia. Less for remainder of containment wall height
B3	2,200	2.33	5,126.9	20k Gal Tanks, Pads	6	172.2	1,973.9	3,152.0	215.0	2,673.6	2,888.6	Assume 6" to 8 Equipment pad plus 12" dia. Less for remainder of containment wall height
C	6,525	9.67	3,663.1	30k Gal Tanks, Pads, Process Equipment	3	2372.4	1,580.2	4,505.3	1,085.7	2,673.6	3,759.3	Assume depth of Equipment Pad is full height of containment wall
D	864	14.17	12,666.9	Mixing Hopper	1	203.6	2,085.0	9,981.9	46.4	972.0	1,018.4	Assume height of hopper is full height of containment wall. Use 271 sqft exterior to building for rainfall. Hopper volume of 864ft provided by Owner.

NEW GRAVEL ACCESS ROAD

LIMITS OF GRADING & SITE IMPROVEMENTS (TYP)

NEW GRAVEL ACCESS ROAD

EXISTING BUILDING B-5

EXISTING 8" PVC WATER LINE

B NEW TANK FARM AND CONTAINMENT PAD

A TRUCK OFFLOAD & CONTAINMENT PAD

NEW HOPPER BUILDING

D

EXISTING EQUIPMENT YARD

B3

B2

B1

NEW EQUIPMENT YARD AND CONTAINMENT PAD

C

EXISTING 8" PVC WATER LINE

NEW GRAVEL ACCESS ROAD

NEW GRAVEL SURFACE

STORM DRAIN OUTFALL

18" RCP

EXISTING BUILDING B-4

LIMITS OF GRADING & SITE IMPROVEMENTS (TYP)

614
1050.2

EXISTING BUILDING B-3

EXISTING BUILDING B-1

EXISTING BUILDING B-2

4" TREATED WATER DISCHARGE TO EXISTING SOLAR EVAPORATION PONDS

PIPE

GRAPHIC SCALE

NORTH

CH2MHILL
Portland Office
2020 S.W. 4th Avenue, 3rd Floor
Portland, Oregon 97201

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL NOTES
A. NOT USED.

KEYED NOTES
1 NEW MCC ENCLOSURE SUPPLIED BY VENDOR.
2 EXISTING PANEL BOARD SERVING NEW B3 BUILDING LOADS.
3 NEW 1600A SERVICE ENTRANCE PANEL BOARD.
4 NEW 1500KVA, 14.4KV-480V TRANSFORMER REPLACING 500KVA TRANSFORMER. TRANSFORMER IS SUPPLIED BY COLUMBIA GRID. DEPTH: CONFIRM.
5 EXISTING 2500KVA, 14.4KV-480V TRANSFORMER.
6 NEW 3000A SERVICE ENTRANCE SWITCHBOARD.
7 EXISTING MCC SERVING EXISTING TLAD PROCESS BUILDING.
8 ELECTRIC POWER OPTION 1:
+ 1500KVA TRANSFORMER
+ 3000A SERVICE ENTRANCE PANELBOARD
9 ELECTRIC POWER OPTION 2:
+ 2500KVA TRANSFORMER
+ 3000A SERVICE ENTRANCE SWITCHBOARD

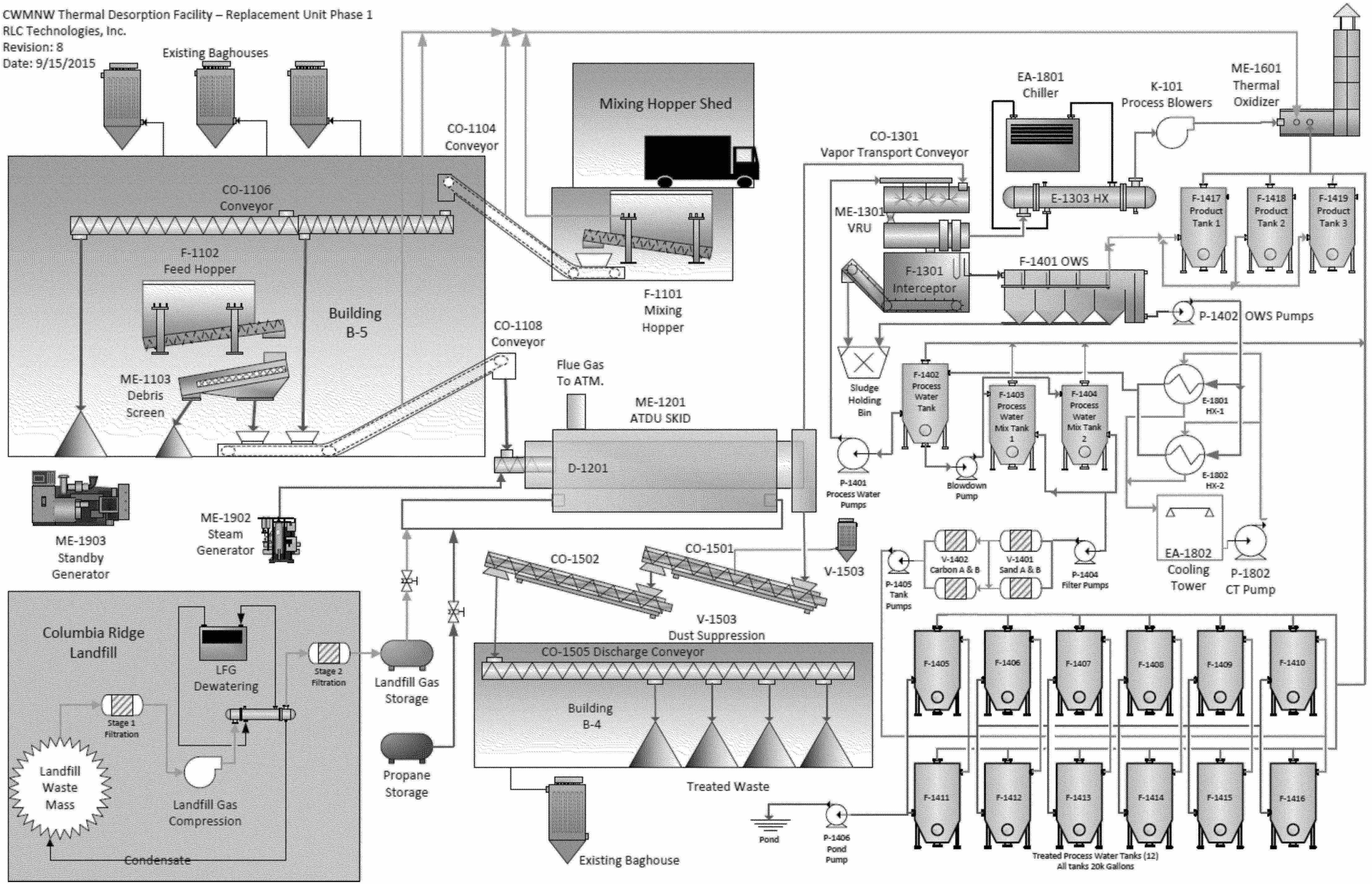
NO.	REVISION OR ISSUE	DATE	BY

PERMIT
OVERALL SITE PLAN

DRAWING NUMBER:
PERMIT SITE PLAN
PRELIMINARY

APPENDIX B
PROCESS FLOW DIAGRAM

CWMNW Thermal Desorption Facility – Replacement Unit Phase 1
RLC Technologies, Inc.
Revision: 8
Date: 9/15/2015



APPENDIX C
SECONDARY CONTAINMENT CALCULATIONS

25 Year, 25 Hour Storm Event *1.5 in*

Containment Area Number (see plan)	Area of Containment, A (sq ft)	Depth of Containment, d (ft)	Volume of Containment, V_c=A.d (cu ft)	Equipment Type	Units of Equipment (Includes Future)	Area of Equipment Pad (sq ft)	Volume of Equipment, V_m (cu ft)	Total Containment Volume Provided, V_c-V_m (cu ft)	Rainfall Volume, V_r (cu ft)	Tank Volume, V_t (cu ft)	Required Containment Volume, V_r+V_t (cu ft)	Notes
A	980	0.5	159.8	N/A	0	0	-	159.8	120.0	-	120.0	Volume = 1/3[Area x Depth]. Area provided to contain incidental minor spills only.
B1	8,076	2.33	14,160.8	20k Gal Tanks, Pads	24	4272.0	7,895.5	6,265.2	759.7	2,673.6	3,433.3	Assume 6"-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
B2	2,060	2.33	4,818.4	20k Gal Tanks, Pads	4	172.3	1,315.9	3,502.5	258.5	2,673.6	2,932.1	Assume 6"-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
B3	2,200	2.33	5,125.9	20k Gal Tanks, Pads	4	172.3	1,973.9	3,152.0	275.0	2,673.6	2,948.6	Assume 6"-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
C	8,525	0.67	5,683.5	20k Gal Tanks, Pads, Process Equipment	1	2373.4	1,582.2	4,101.3	1,065.7	2,673.6	3,739.3	Assume depth of Equipment/Pad is full height of containment wall
D	890	14.17	12,666.3	Mixing Hopper	1	203.6	2,885.0	9,781.3	46.4	972.0	1,018.4	Assume height of hopper is full height of containment wall. Use 371 sqft exterior to building for rainfall. Hopper volume of 36CY provided by Owner.

APPENDIX D
TDU SYSTEM CAPACITY

RLC Technologies TDU System Capacity 30.0 MMBTU/HR

MMBTU/HR Required

	Tons per Hour																			
% Water	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0%	0.692	1.383	2.075	2.767	3.458	4.150	4.842	5.533	6.225	6.917	7.608	8.300	8.992	9.683	10.375	11.067	11.758	12.450	13.142	13.833
5%	0.898	1.796	2.694	3.591	4.489	5.387	6.285	7.183	8.081	8.979	9.877	10.774	11.672	12.570	13.468	14.366	15.264	16.162	17.060	17.957
10%	1.104	2.208	3.312	4.416	5.520	6.624	7.729	8.833	9.937	11.041	12.145	13.249	14.353	15.457	16.561	17.665				
15%	1.310	2.621	3.931	5.241	6.551	7.862	9.172	10.482	11.792	13.103	14.413	15.723	17.034							
20%	1.516	3.033	4.549	6.066	7.582	9.099	10.615	12.132	13.648	15.165	16.681									
25%	1.723	3.445	5.168	6.891	8.613	10.336	12.059	13.781	15.504	17.227										
30%	1.929	3.858	5.787	7.716	9.644	11.573	13.502	15.431	17.360											
35%	2.135	4.270	6.405	8.540	10.675	12.811	14.946	17.081												
40%	2.341	4.683	7.024	9.365	11.706	14.048	16.389													
45%	2.547	5.095	7.642	10.190	12.737	15.285	17.832													
50%	2.754	5.507	8.261	11.015	13.769	16.522														
55%	2.960	5.920	8.880	11.840	14.800	17.759														
60%	3.166	6.332	9.498	12.664	15.831															
65%	3.372	6.745	10.117	13.489	16.862															
70%	3.579	7.157	10.736	14.314	17.893															
75%	3.785	7.569	11.354	15.139																
80%	3.991	7.982	11.973	15.964																
85%	4.197	8.394	12.591	16.788																
90%	4.403	8.807	13.210	17.613																
95%	4.610	9.219	13.829																	
100%	4.816	9.631	14.447																	

**** MMBTU/HR required estimates above use 60% Thermal Transfer Efficiency and 900Deg F operating temperatures

State of Oregon
Department of
Environmental
Quality

Organic Recovery Unit #2
Design and Operations Plan

For

Chemical Waste Management of the Northwest, Inc.

Arlington Facility • ORD 089 452 353
17629 Cedar Springs Lane
Arlington, Oregon

Standalone Document No. 22

This document is issued by the
Oregon Department of Environmental Quality

DEQ Issued Rev. 9 September, 2016

TABLE OF CONTENTS

LIST OF APPENDICES

SECTION 1 - **ORGANIC RECOVERY UNIT #2**

1.1 Introduction

This *Organic Recovery Unit #2 Design and Operations Plan* (Plan) establishes the design and operating standards for the Bioremediation and the Organic Recovery Unit (ORU) treatment processes.

1.2 Purpose

- To ensure compliance with all aspects of Organic waste treatment under 40 CFR §264 subparts AA,BB, and CC air emissions standards and;,
- To ensure treatment standards are achieved for all treated wastes per 40 CFR §268.40.

1 Organic Recovery Unit ORU-2

CWMNW operates two Organic Recovery Units (ORU), designated ORU-1 and ORU-2. Both ORU treatment systems are located adjacent to Containment Building B-5. ORU-1 received approval to operate in 2010 and has been operating since that time. ORU-1 is covered under *Standalone #19 – Bioremediation and Organic Recovery Unit Design and Operations Plan.*

ORU-2 was constructed and commissioned in 2016, The ORU-2 treatment unit treats listed and/or characteristic hazardous wastes using an indirect fired thermal process to reduce listed and/or characteristic hazardous wastes to the levels specified in 40 CFR Part 268. Secondary treatment methods may be required to reduce the treated listed and/or characteristic hazardous wastes to the levels specified in 40 CFR Part 268 prior to land disposal. Wastes accepted for treatment through the ORU-2 treatment system are staged inside Building B-5 and in approved containers in outside storage areas. Post-treatment solids awaiting LDR clearance or further treatment are temporarily stored in piles inside Building B-4 or B-5.

1.3 ORU-2 Treatment System

ORU-2 material handling conveyers receive material from two feed hoppers and convey the media to be treated to the ORU treatment unit. System feed conveyors are fully enclosed and ventilated to the thermal oxidizer. The ORU-2 system consists of a double pass rotary furnace that indirectly heats the media traveling through the inside of the rotary tube, and the treated media discharges at the feed end of the unit. System components subject to freezing are heat traced and insulated to prevent freezing. As-built design plans for the ORU-2 are contained in Appendix A.

1.4 Wastes Approved for Treatment

ORU-2 physically treat media with organic contamination. The following table illustrates the general waste families and possible associated RCRA Codes being treated by the system.

Table 19-1: ORU Approved Waste Codes

APPROVED EPA CODES
D001, D002, DOO3, D004, D005, D006, D007, D008, D009, D010, D011, D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, DO36, D037, D038, D039, D040, F001, F002, F003, F005, F034, F037, F038, K001, K048, K049, K050, K051, K052, K143, K169, K170, K171, K172, P037, P059, P089, U002, U019, U031, U036, U051, U052, U060, U061, U112, U129, U140, U154, U159, U161, U165, U188, U210, U220, U228, U239

The ORU Treatment systems are made up of several subsystems that include the feed systems, an indirect fired Anaerobic Thermal Desorption Unit (ATDU), ash handling systems, vapor condensing system, process water handling and treatment systems, and air emissions control systems. A process flow diagram for the various systems is contained in Appendix B.

1.5 Waste Segregation

The treatment of the wastes with codes in Table 19-1 through the ORU system may require the isolation of process residuals dependent on the EPA codes associated with the waste being treated. These incompatible wastes will be treated separately following a system change over. The system changeover process shall include the following tasks, all wastes in the feed system will be processed through the ATDU, all process water will be evacuated from the system and treated through the process water treatment system, and all sludges accumulated in the sludge removal system will be removed and stored in accordance with the WAP. Evacuated residual sludges and process waters will be treated and/or managed in accordance with the WAP.

SECTION 2 - **ORU-2 SYSTEM OVERVIEW**

2.1 Anaerobic Thermal Desorption Unit

The system is designed to separate the organic constituents from contaminated media in such a manner that they are preserved for collection and recycling. The Anaerobic Thermal Desorption Unit (ATDU) includes a rotating cylinder that is slightly inclined downward from the product feed end. This rotating cylinder is enclosed within an outer shell, within which heat is applied to the outside of the rotating cylinder. Either Landfill Gas or Propane will be used to fire the ATDU. Wastes inside the ATDU do not directly contact the heat source, and an inert atmosphere is maintained in the cylinder to prevent oxidation of the organic constituents. The indirectly heated cylinder vaporizes water and organics contained in the waste. The primary heat transfer mechanism is conduction through the cylinder wall.

2.2 ATDU Operating Conditions

The ATDU rotating cylinder operates under an inert anaerobic atmosphere, thereby preventing any oxidation or destruction of the hydrocarbon or chemical constituents. The inert anaerobic atmosphere is maintained during start-up and shutdown by purging the ATDU with steam to displace the oxygen. During normal operations, the water content of the feedstock is typically sufficient to generate enough water vapor to maintain the inert atmosphere inside the desorber and additional steam is therefore not required. The seals at the inlet and discharge ends of the rotary drum combined with the double tipping valve airlocks at either end maintain a non-oxidizing atmosphere in which the waste can be safely vaporized.

An oxygen sensor connected to the SCADA control system is installed in the discharge end of the ATDU continuously monitors the oxygen concentration within the rotary drum which during normal operations is typically below 1 percent. The SCADA control system the oxygen sensor measures the oxygen concentration inside the drum, in the event the oxygen level increases above 1 percent, steam can be added to reduce the oxygen concentration down to normal levels. In the event the oxygen level rises above 5 percent this would constitute a malfunction condition, the SCADA system will automatically shut down the burners and stop feed into the ATDU.

2.3 ATDU Shutdown Strategy

The system is shutdown employing three scenarios; these are Normal. Malfunction, and Emergency scenarios. The following is a discussion for each scenario;

2.3.1 Emergency Shutdown

Emergency shutdowns are required for

- Feed to the ATDU system is shutdown, feed conveyor system are shutdown
- Burners shutdown
- ATDU shutdown.
- Thermal Oxidizer bypass valve set to open
- Thermal Oxidizer is shutdown

2.3.2 Normal Plant Shutdown

The normal shutdown procedure involves shutting down equipment from the feed end of the unit down through the discharge equipment, allowing adequate time for each conveyor or piece of equipment to fully discharge before proceeding to the next item. The rotary drum will be allowed to cool before drum rotation is stopped. During this cooldown period steam is added to ensure the anaerobic atmosphere inside the ATDU is maintained. After the unit has cooled the vapor recovery and ancillary support systems are shut down. Finally, the thermal oxidizer system is shutdown

2.3.3 Shutdown due to Malfunction

The ATDU system is programmed with both software and hardwired process interlocks to ensure components shut down automatically upon the failure or malfunction of any critical piece of process equipment. Failure of the system to maintain proper combustion in the furnace, process conditions in the ATDU or thermal oxidizer, or a failure of the material handling equipment downstream of the ATDU will cause the system to automatically switch off the combustion system, stop the feed of material into the unit. Should the malfunction involve the thermal oxidize, the system, will divert process vapors away from the thermal oxidizer until the upset condition can be remedied.

2.3.4 Emergency Plant Shutdown

Hardwired interlocks will initiate an emergency shutdown upon loss of primary electrical power, high oxygen concentration inside the ATDU or a runaway stack temperature in the ATDU furnace or Thermal Oxidizer Unit. Redundant gas safety valves installed on each burner spring fail closed if there is any loss in the numerous permissive conditions or interlocks that allow their opening. Feed to the plant is stopped automatically. In certain cases, the thermal oxidizer will remain running but should the emergency condition involve the thermal oxidizer, the system will divert process vapors away from the thermal oxidizer until the upset condition can be remedied. An uninterruptible power supply (UPS) supports the control system to allow the operator to monitor the system shutdown in the event of complete power loss.

2.4 Feed Systems

A below grade mixing hopper south of contaminant Building B5 receives untreated medias, moisture conditions them if necessary and feeds the waste through a series of conveyors to the ATDU for thermal separation. If desired this mixing hopper feed system can also pile the moisture conditioned media inside Building B-5 allowing for storage of the media inside the building. A second feed hopper inside the building is loaded by mechanical methods, the hopper feeds a debris screen which removes materials meeting the definition of debris contained in 40 CFR 268.45 from the waste. Oversize media separated by the screening system is classified as debris and is stored on the floor in containment Building B-5 for delivery to other treatment methods in accordance with Standalone #11 - *Debris Treatment Plan*. The undersize media is then fed through a series of conveyors to the ATDU for thermal separation. An arrangement of airlocks ensure that oxygen is not able to enter the unit during the process operation. The ORU Feed Systems are designed to maintain compliance with 40 CFR 61, Subpart FF (Benzene Waste Operations NESHAP, or BWON) control and treatment standards to manage BWON subject materials when required.

2.5 Treated Ash Systems

The ORU vaporizes organic contaminants contained in media and produces a treated ash that is cooled through jacketed cooling conveyors. A series of transfer conveyors route the processed solids to several separate discharge points in Building B-4, each discharge point will be used to create piles inside the containment building approximately 250 tons in size. Ash may also be stored in containment Building B-5 or in approved containers prior to disposal or further treatment. The ash from the treatment process can be landfilled once the waste meets LDR limits in 40 CFR 268.7. Ash that does not meet the constituent specific LDRs is further treated and cleared before disposal. Confirmation testing is completed in accordance with Standalone #1- *Waste Analysis Plan.*

2.6 Vapor Recovery System

The organic vapors and water are gasified inside the rotating cylinder, and conveyed to a condensing system. The condensing system uses process water to quench the organic vapors. Once quenched the resulting quench water is separated into an organic fraction and a water fraction. The organic fraction separated from the treated wastes can be generally classified in two categories;

2.6.1 Petroleum Fractions

The condensed and separated organic fraction for wastes with recoverable petroleum fraction is not regulated according to 40 CFR 261.6(a)(3)(iv)(C), and is transferred to one of three product storage tanks in the tank farm area. Organic fraction product for these wastes is recycled as a commodity depending on makeup.

2.6.2 Non-Petroleum Fractions

The condensed organic fraction for wastes without recoverable petroleum fractions is subject to the disposal requirements contained in 40 CFR 268 and are managed in accordance with *Standalone #1 – Waste Analysis Plan*. The condensed organic fraction is transferred as process water to the water treatment system in the tank farm area.

2.7 Settled Solids

Settled solids which accumulate in the vapor recovery sump are conveyed out of the sump into a closed hopper. These accumulated solids may be reintroduced back into the ORU feed system for treatment using pumps or mechanical means. In some cases, a centrifuge may be used to dewater these solids for shipment offsite for additional treatment. Liquids separated in the centrifuging process are introduced back into the process water for reuse and/or final treatment.

2.8 Process Water System

Reclaimed commodities are separated from the process water fraction in the oil water separator. Process water is recycled back into the system, and any residual water condensed out of the incoming waste is stored in the process water tank. Residual process water is transferred to surge tanks in the tank farm area. Process water is treated through an onsite water treatment system in the tank farm area with sand and carbon filtration. Chemical treatment prior to filtration may be required for some waste streams. Treated process water meeting LDR requirements may be

reused for moisture conditioning of wastes in the solidification and stabilization process, or sent to the facilities solar evaporation ponds.

2.9 Air Emission Controls

Any residual non-condensable organic vapors are passed through a thermal oxidizer for complete destruction. The thermal oxidizer operation and performance is regulated by the facilities ACDP permit.

SECTION 3 - **ORU-2 SYSTEM TANKS**

The following twenty-one (21) tanks are used in the ORU treatment system. Tank numbers listed below coincide with tank numbers provided on the flow diagram in Appendix B. All hazardous waste storage tanks associated with the ORU treatment system are managed in accordance with Standalone #8 – *Bulk Storage Plan*.

Table 22-3: ORU-2 Tank Listing

TANK #	DESCRIPTION	TYPE	CAPACITY (Gal)
RCRA Tanks			
F-1301	Interceptor	Above ground, horizontal, flat bottom, CS	3,000
F-1401	Oil Water Separator	Above ground, horizontal, cone bottom, CS	13,200
F-1402	Process Water Tank	Above ground, vertical, cone bottom, CS	20,000
F-1403	Process Water Mix Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1404	Process Water Mix Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1405	Treated Process Water Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1406	Treated Process Water Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1407	Treated Process Water Tank 3	Above ground, vertical, cone bottom, CS	20,000
F-1408	Treated Process Water Tank 4	Above ground, vertical, cone bottom, CS	20,000
F-1409	Treated Process Water Tank 5	Above ground, vertical, cone bottom, CS	20,000
F-1410	Treated Process Water Tank 6	Above ground, vertical, cone bottom, CS	20,000
F-1411	Treated Process Water Tank 7	Above ground, vertical, cone bottom, CS	20,000
F-1412	Treated Process Water Tank 8	Above ground, vertical, cone bottom, CS	20,000
F-1413	Treated Process Water Tank 9	Above ground, vertical, cone bottom, CS	20,000
F-1414	Treated Process Water Tank 10	Above ground, vertical, cone bottom, CS	20,000
F-1415	Treated Process Water Tank 11	Above ground, vertical, cone bottom, CS	20,000
F-1416	Treated Process Water Tank 12	Above ground, vertical, cone bottom, CS	20,000
ME-1101	Mix Hopper A	Above Ground Mix/Feed Hopper, CS	7,473
ME-1102	Feed Hopper B	Above Ground Feed Hopper	1,742
V-1401A	Sand Filter A	Above Ground Sand Filter A	100
V-1401B	Sand Filter B	Above Ground Sand Filter B	100
V-1402	Carbon Filter	Stainless Steel	3,950
Non-RCRA Tanks			
F-1417	Product Tank 1	Above ground, vertical, cone bottom, CS	20,000
F-1418	Product Tank 2	Above ground, vertical, cone bottom, CS	20,000
F-1419	Product Tank 3	Above ground, vertical, cone bottom, CS	20,000

SECTION 4 - **SYSTEM SECONDARY CONTAINMENT**

The ORU-2 System containment is made up of 5 separate containment systems as listed below:

Table 22-4: ORU-2 System Containment

Site Plan Identifier	Area Description	Construction	Required Containment	Actual Containment
C	ORU System Equipment	Reinforced Concrete	3,739.3 ft^3	4,101.3 ft^3
B3	Product Tank Storage	Reinforced Concrete	2,948.6 ft^3	3,152.5 ft^3
B2	Process Water Treatment Area	Reinforced Concrete	2,932.1 ft^3	3,502.5 ft^3
B1	Treated Water Storage	Reinforced Concrete	3,433.3 ft^3	6,265.2 ft^3
D	Mixing Hopper Vault	Reinforced Concrete	1,018.4 ft^3	9,781.3 ft^3
A	Truck Offload Area	Reinforced Concrete	120 ft^3	159.8 ft^3

All ORU-2 containment areas are designed to meet the requirements contained in 40 CFR §264.193. 40 CFR §264.193(e)(2) requires that the secondary containment areas be large enough to contain the capacity of the largest tank plus precipitation from a 25-year, 24-hour storm, (refer to Appendix C for containment calculations). All joints in containment slabs are constructed with chemical-resistant waterstops meeting the requirements of 40 CFR §264.193(e)(2)(iii)). The slab is coated with a chemically compatible impermeable coating meeting the requirements of 40 CFR §264.193(e)(2)(iv)). Stormwater collected from the sumps in these containment areas will be pumped to the process water system and ultimately treated through the process water treatment system. The P.E. certification of the containment structures and tanks required by 40 CFR 264.192(b) will be maintained at the facility in the operating record.

SECTION 5 - **ORU-2 OPERATIONS**

5.1 Organic Recovery Unit Contaminated Waste Handling

Following arrival and acceptance of the waste, the wastes are either stored in approved storage areas or fed directly into the treatment system through two feed hoppers in the system.

5.2 Subpart CC Waste Handling

Wastes subject to Subpart CC Level 1 controls will be stored or accepted in roll-off boxes and dump type vehicles may be placed on the slab floor in Containment Building B-5. Wastes subject to Subpart CC Level 2 controls will remain in the Level 2 shipping containers in accordance with Standalone # 9 - *Container Storage Design and Operations Plan* until they are transferred to the ORU-2 outside mixing feed hopper and amended with drying agents as necessary. Wastes with higher moisture contents may also be mixed with dryer materials in the mixing feed hopper or inside Building B-5 to attain appropriated moisture content.

5.3 Subpart FF Waste Handling

CWMNW tracks the facility's Total Annual Benzene (TAB) and it has historically been less than 1 Mg; therefore, CWMNW is not subject to controls in Subpart FF. However, in the event that generators require their specific wastes to be managed under controls, wastes subject to 40 CFR 61, Subpart FF may be handled in controlled containers such as roll off boxes until the material is transferred into the ORU-2 mixing feed hopper. These wastes will be maintained in containers that meet BWON control requirements, and shall be inspected and monitored in order to comply with all related standards. The vapors throughout the ORU feed system are routed through closed-vent systems to control devices, and all the equipment and piping lines are subject to BWON inspection and monitoring requirements.

5.4 Waste Preparation for Organic Recovery

In general, waste preparation improves the ability of the ORU-2 to treat the contaminated waste. This preparation includes specific operations for screen sizing and size reduction that are also dependent on the uniformity, moisture, and liquid content of the incoming contaminated waste.

Screening (vibrating or non-vibrating) is a primary operation, and wastes are screened or strained to remove debris. Blending low and high concentration waste or high and low boiling point wastes optimizes the operation and reduces problems in liquids recovery.

5.5 Organic Recovery Unit Treatment Capacity ORU-2

The indirect-fired ATDU has an ultimate design capacity of 30 million British thermal units (30 MMBtu), and a theoretical heat transfer efficiency of 60-percent. The temperature capacity of the system is 1,200°F. The actual operating temperatures vary depending upon the boiling points of the organic constituents being extracted such that optimal fuel consumption is maintained.

The theoretical treatment capacity of the system (tons/hour) depends primarily upon the moisture content of the waste and the thermal capacity of the ATDU. Appendix D provides the estimated treatment capacity of the system running at 900° F, based upon the moisture content of incoming waste, and using a thermal transfer efficiency of 60-percent.

SECTION 6 - ORU-2 REGULATORY STANDARDS

6.1 Organic Recovery Unit - 40 CFR Part 264 Subparts J/X Compliance

6.1.1 40 CFR Part 264, Subpart J Compliance

The ORU contains process water tanks that store and/or treat hazardous waste and are subject to 40 CFR Part 264, Subpart J. These tanks are managed in compliance with Standalone #8 - *Bulk Storage Plan*, which contains requirements for inspection and operation of these tanks. The hazardous waste storage tank systems in both of the ORU systems have been adequately designed, have sufficient structural integrity, and are acceptable for storing hazardous waste. Required engineer's certifications are contained in Standalone #8 - *Bulk Storage Plan*. Further, the tanks are provided with sufficient secondary containment meeting the requirements of 40 CFR 264.193. Containment calculations for the system are shown in Appendix C. All tanks associated with the ORU are included in Standalone #8 - *Bulk Storage Plan*, which includes all permitted RCRA tanks at the facility.

In the event of any leak or spill from a tank system or secondary containment system, the facility shall comply with response requirements per 40 CFR 264.196. Closure and post-closure care of the hazardous waste tank systems are discussed in Standalone #5 – *Closure/Post-Closure Plan*.

6.1.2 40 CFR Part 264, Subpart X Compliance

The ORU-2 treatment system contains a thermal desorption unit (TDU) and shaker screen equipment that is subject to 40 CFR Part 264, Subpart X. These miscellaneous units are most similar to tank systems; and thus, the applicable and appropriate provisions of 40 CFR Part 264, Subpart J shall be complied with to ensure protection of human health and the environment. Standalone #23 – Subpart X units includes these pieces of equipment.

6.2 Routine Tank Inspections

The elements and frequency of routine inspections of ORU-2 systems hazardous waste tanks, piping and containment are included in Standalone #3 - *Inspection Plan*. The tanks and piping shall be inspected for visible leaks and general condition. The overfill alarm systems shall be tested to insure they are in working order. The containment area and sumps shall be inspected for evidence of any liquid collection and evidence of any leakage from the associated pipes, pumps, tanks and equipment contained within the area. An inspection form for both the ORU systems tanks, piping and containment is contained in Standalone #3 - *Inspection Plan*.

6.3 RCRA Subparts AA, BB and CC and Benzene NESHAPS - Applicability and Compliance for Organic Recovery Systems

6.3.1 40 CFR Part 264, Subpart AA Applicability

40 CFR Part 264, Subpart AA defines the air emission standards for process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations. ORU-2 does not contain any distillation, fractionation, thin-film evaporation, solvent

extraction, or air or steam streaming operation; and thus, 40 CFR Part 264, Subpart AA does not apply to either ORU Treatment system and subsystems.

6.3.2 40 CFR Part 264, Subpart BB Applicability and Compliance

ORU-2 systems are subject to the requirements of 40 CFR Part 270; and thus, all equipment that contains or contacts hazardous waste with organic concentrations of at least 10 percent by weight is subject to 40 CFR Part 264, Subpart BB. Compliance requirements for 40 CFR Part 264, Subpart BB is discussed in the Organic Recovery Unit Controls and Monitoring section below

6.3.3 40 CFR Part 264, Subpart CC Applicability

The requirements of 40 CFR Part 264, Subpart CC apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to 40 CFR Part 264, Subparts I, J, or K. As discussed in Section 3.6.1, the ORU does contain hazardous waste storage tanks subject to 40 CFR Part 264, Subpart J; however, per 40 CFR 264.1080(b)(7), the requirements of 40 CFR Part 264, Subpart CC do not apply to a hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR Part 60, Part 61, or Part 63. All hazardous waste storage tanks in the ORU are equipped with and operate with air emission controls in accordance with 40 CFR Part 61, Subpart FF; and thus, the hazardous waste storage tanks in the ORU are not subject to 40 CFR Part 264, Subpart CC. All 40 CFR Part 264, Subpart CC requirements, if any, are contained in the facilities ACDP Permit.

Subpart CC regulations are applicable to containers which are not handled in accordance with 40 CFR Part 61, Subpart FF, having a design capacity greater than 0.1 m^3 (approximately 26 gallons), and containing hazardous waste that has an average volatile organic (VO) concentration greater than 500 ppm by weight (ppmw) at the point of waste generation. Waste received at the facility for ORU treatment will typically arrive or be placed in containers that are larger than the exempted capacity and may contain hazardous waste with VO concentrations greater than 500 ppmw. CWMNW complies with Subpart CC container standards as provided in the Permit and Standalone # 9 - *Container Storage Design and Operations Plan*. In addition, the waste in any container is unloaded in an expedient manner to minimize potential organic air emissions. If, for any reason, unloading of the contaminated waste does not commence immediately, the container is to be kept covered with a lid that meets Subpart CC Level 1 controls. The lid or cover forms a continuous barrier over the entire surface area with no visible cracks, holes, gaps or other open spaces.

6.3.4 40 CFR Part 61, Subpart FF Applicability and Compliance

The ORU at certain times is subject to 40 CFR Part 61, Subpart FF (BWON), since it is part of a facility that intermittently treats, stores, and disposes of BWON wastes from chemical plants and petroleum refineries where the regulation does apply. CWMNW tracks the facility's Total Annual Benzene (TAB), and has historically been less than 1 Mg. Therefore, CWMNW facility is not subject to controls in Subpart FF. However, should the generator require their specific wastes be managed under controls, wastes subject to 40 CFR 61, Subpart FF may be handled in controlled containers such as roll off boxes until the material is loaded into the mixing feed hopper. These wastes shall be maintained in containers that meet BWON control requirements, and shall be

inspected and monitored as to comply with all related standards. The vapors throughout the ORU-2 feed system are routed through closed-vent systems to control devices, and all the equipment and piping lines are subject to BWON inspection and monitoring requirements.

All fixed-roof tanks shall have no detectable emissions in accordance with Method 21 standards and must be closed and sealed unless it is opened for sampling, inspections, maintenance, repair or removal of the waste. All organic vapors that are vented shall be maintained in a closed-vent system that routes to the thermal oxidizer control device.

In instances where the tank is venting to the atmosphere by a pressure relief device, these devices must remain in closed, sealed positions during normal operations. They may be opened if it is necessary to prevent damage or permanent disfiguration to tank, during filling or emptying, or during malfunctions. This follows the alternative standard for tanks under 40 CFR 61.351, allowing tanks handling primarily organic material to have only a pressure relief device.

The oil water separator in the ORU system is vented to the closed vent system and to the thermal oxidizer control device.

SECTION 7 - **ORU-2 CONTROLS AND MONITORING**

The entire ORU-2 unit is centrally-monitored and controlled using a SCADA control package. The computer-based process controls provide graphic screens for effective plant control, monitoring, and data storage. The ORU-2 SCADA control system allow real-time access to all key plant parameters, and records the required operating parameters for compliance with the Part B permit and the ACDP permit. The demonstrated compliance SCADA system records the following parameters:

- Monitoring point CP1 - TDU Flue gas temperature - Deg F
- Monitoring point CP2 - TDU Syngas temperature - Deg F
- Monitoring point CP3 – TDU Infeed rate - TPH
- Monitoring point CP4 - Thermal oxidizer chamber temperature - Deg F
- Monitoring Point CP5 - Thermal oxidizer feed valve position – Open/Closed

The SCADA process controls enable the operator to improve system capacity, optimize fuel consumption, and protect the system against accidental malfunctions. The computerized system includes automatic fail safes for controlled shutdown of the system during upsets.

The process instrumentation and electrical switch gear is housed in a motor control center. The SCADA control system and operators control station is located in the control room south of the thermal processing system. Plant operators are trained in the operational and maintenance aspects of the system and these requirements are contained in Standalone #2 - *Security Procedures, Hazard Prevention, and Training Plan.*

7.1 Control Device Monitoring

The emissions control devices throughout the ORU system require monitoring of several different parameters, and the requirements for these are established in the facilities ACDP permit. The facility shall manage leaks identified by regular inspections in compliance with the requirements in 40 CFR Part 264.1064.

7.2 Tank Monitoring

As indicated in Section 3.6.3, all hazardous waste storage tanks in the ORU-2 system are equipped with and operate with air emission controls in accordance with 40 CFR Part 61, Subpart FF; and thus, the hazardous waste storage tanks in the ORU-2 system are not subject to 40 CFR Part 264, Subpart CC. The facility shall comply with all applicable requirements under 40 CFR Part 61, Subpart FF. All hazardous waste tanks are equipped with a fixed roof cover and shall be visually inspected by the owner and operator quarterly, and monitored via Method 21 annually. If leaks are detected, responses and recordkeeping shall be made in compliance with 40 CFR Part 264, Subpart BB and 40 CFR 264.1064.

7.3 Other Equipment Monitoring

The ORU-2 is in heavy liquid service, and all pumps, valves, and pressure relief devices shall be observed for potential leaks using the following methods: Audible, Visual, and Olfactory (AVO), per 40 CFR Part 264, Subpart BB. There is no stated monitoring frequency for equipment in heavy liquid service according to 40 CFR Part 264, Subpart BB; however, monitoring shall be conducted quarterly consistent with industry best management practices, and to satisfy the BWON quarterly visual inspection requirements. When a leak is discovered, 40 CFR Part 60, Method 21 shall be used to measure the severity.

All sampling stations within ORU-2 system shall be built and kept up to design and installation requirements in order to stay compliant with 40 CFR, Subpart BB. All operational open-ended lines or pipes shall have a cap, plug, or double valve system when not in use.

APPENDIX A
AS-BUILT DESIGN PLANS FOR ORU-2

25 Year, 24 Hour Storm Event 1.5 in

Containment Area Number (see plan)	Area of Containment, A (sq ft)	Depth of Containment, d (ft)	Volume of Containment, V=A x d (cu ft)	Equipment Type	Units of Equipment (includes Future)	Area of Equipment Pad (sq ft)	Volume of Equipment, V_{EQ} (cu ft)	Total Containment Volume Provided, $V_T = V_{EQ} + V_{CONT}$ (cu ft)	Rainfall Volume, V_R (cu ft)	Tank Volume, V_T (cu ft)	Required Containment Volume, $V_T + V_R$ (cu ft)	Notes
A	960	0.5	159.8	N/A	0	0	-	159.8	230.0	-	229.8	Volume = [(Area x Depth) - Area occupied by concrete] incidental minor spills only
B1	6,876	2.33	16,180.8	20k Gal Tanks, Pads	24	172.2	2,955.5	6,265.3	795.7	2,673.6	3,469.3	Assume 6" to 8 Equipment pad plus 12" dia. cans for remainder of containment wall height
B2	2,868	2.33	4,013.4	20k Gal Tanks, Pads	4	172.2	1,103.9	3,502.5	256.5	2,673.6	2,931.1	Assume 6" to 8 Equipment pad plus 12" dia. cans for remainder of containment wall height
B3	2,200	3.33	5,126.9	20k Gal Tanks, Pads	4	172.2	1,979.9	3,152.0	215.0	2,673.6	2,888.6	Assume 6" to 8 Equipment pad plus 12" dia. cans for remainder of containment wall height
C	6,525	0.67	3,663.1	30k Gal Tanks, Pads, Process Equipment	3	2372.4	1,580.2	4,326.3	1,085.7	2,673.6	3,759.3	Assume depth of Equipment Pad is full height of containment wall
D	864	14.17	12,666.9	Mixing Hopper	1	203.6	2,085.0	9,581.9	46.4	972.0	1,018.4	Assume height of hopper is full height of containment wall. Use 271 sqft exterior to building for rainfall. Hopper volume of 864ft occupied by Dunnit

NEW GRAVEL ACCESS ROAD

LIMITS OF GRADING & SITE IMPROVEMENTS (TYP)

EXISTING BUILDING B-5

NEW GRAVEL ACCESS ROAD

EXISTING 8" PVC WATER LINE

B NEW TANK FARM AND CONTAINMENT PAD

A TRUCK OFFLOAD & CONTAINMENT PAD

NEW HOPPER BUILDING

D

B3

B2

B1

NEW EQUIPMENT YARD AND CONTAINMENT PAD

C

EXISTING EQUIPMENT YARD

EXISTING 8" PVC WATER LINE

NEW GRAVEL SURFACE

NEW GRAVEL ACCESS ROAD

STORM DRAIN OUTFALL

18" RCP

EXISTING BUILDING B-4

LIMITS OF GRADING & SITE IMPROVEMENTS (TYP)

614
1050.2

EXISTING BUILDING B-3

4" TREATED WATER DISCHARGE TO EXISTING SOLAR EVAPORATION PONDS

EXISTING BUILDING B-1

EXISTING BUILDING B-2

PIPE

GRAPHIC SCALE

NORTH

CH2MHILL
Portland Office
2020 S.W. 4th Avenue, 3rd Floor
Portland, Oregon 97201

PRELIMINARY
NOT FOR CONSTRUCTION

GENERAL NOTES
A. NOT USED.

KEYED NOTES
1 NEW MCC ENCLOSURE SUPPLIED BY VENDOR.
2 EXISTING PANEL BOARD SERVING NEW B3 BUILDING LOADS.
3 NEW 1600A SERVICE ENTRANCE PANEL BOARD.
4 NEW 1500KVA, 14.4KV-480V TRANSFORMER REPLACING 500KVA TRANSFORMER. TRANSFORMER IS SUPPLIED BY COLUMBIA GRID. DEPTH: CONFIRM
5 EXISTING 2500KVA, 14.4KV-480V TRANSFORMER.
6 NEW 3000A SERVICE ENTRANCE SWITCHBOARD.
7 EXISTING MCC SERVING EXISTING TLAD PROCESS BUILDING.
8 ELECTRIC POWER OPTION 1:
+ 1500KVA TRANSFORMER
+ 3000A SERVICE ENTRANCE PANELBOARD
9 ELECTRIC POWER OPTION 2:
+ 2500KVA TRANSFORMER
+ 3000A SERVICE ENTRANCE SWITCHBOARD

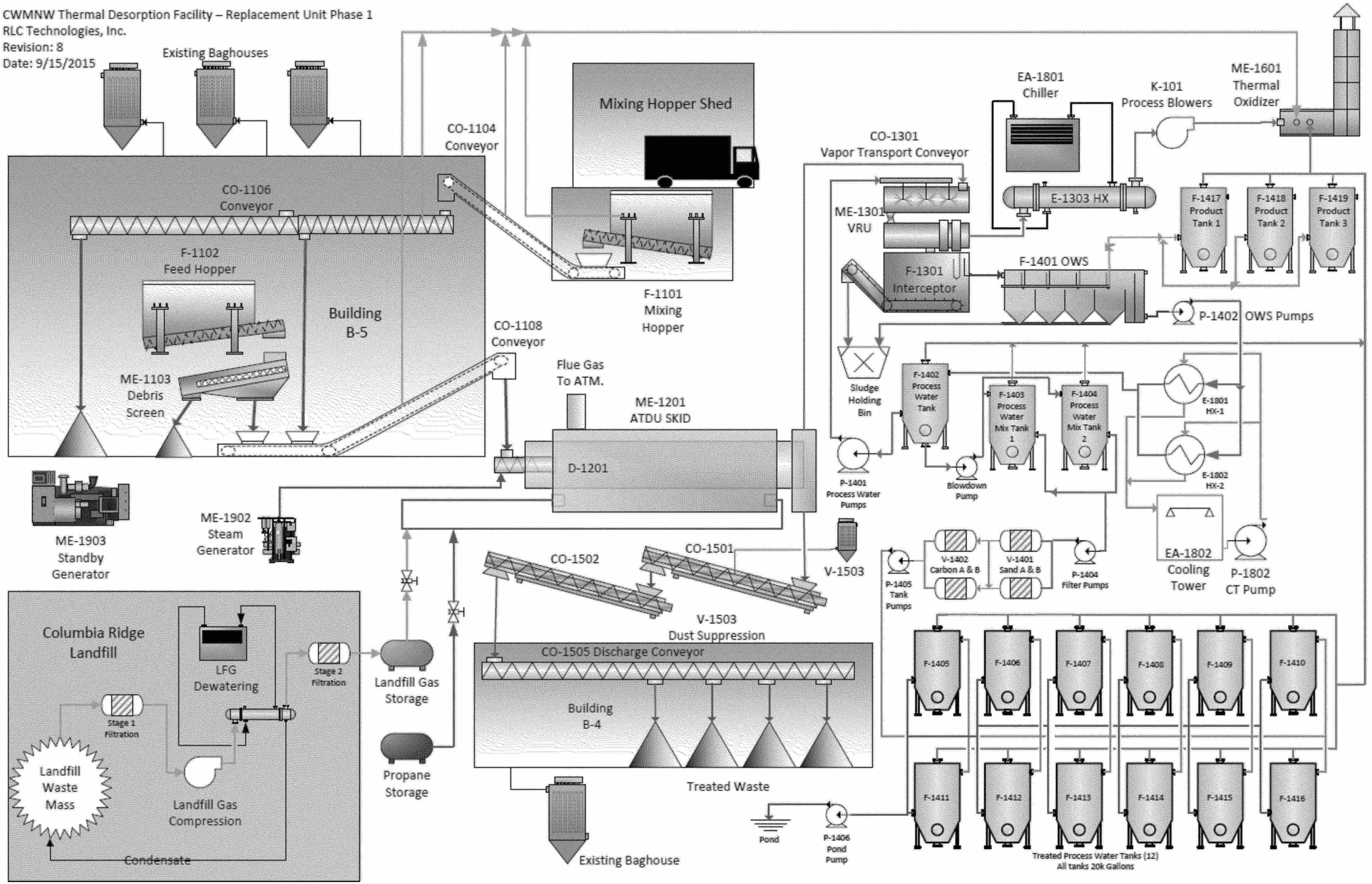
NO.	REVISION OR ISSUE	DATE	BY

PERMIT
OVERALL SITE PLAN

DRAWING NUMBER:
PERMIT SITE PLAN
PRELIMINARY

APPENDIX B
PROCESS FLOW DIAGRAM

CWMNW Thermal Desorption Facility – Replacement Unit Phase 1
RLC Technologies, Inc.
Revision: 8
Date: 9/15/2015



APPENDIX C
SECONDARY CONTAINMENT CALCULATIONS

25 Year, 25 Hour Storm Event *1.5 in*

Containment Area Number (see plan)	Area of Containment, A (sq ft)	Depth of Containment, d (ft)	Volume of Containment, V_c=A.d (cu ft)	Equipment Type	Units of Equipment (Includes Future)	Area of Equipment Pad (sq ft)	Volume of Equipment, V_{eq} (cu ft)	Total Containment Volume Provided, V_c-V_{eq} (cu ft)	Rainfall Volume, V_r (cu ft)	Tank Volume, V_t (cu ft)	Required Containment Volume, V_r+V_t (cu ft)	Notes
A	980	0.5	159.8	N/A	0	0	-	159.8	120.0	-	120.0	Volume = 1/3[Area x Depth]. Area provided to contain incidental minor spills only.
B1	8,076	2.33	14,160.8	20k Gal Tanks, Pads	24	177.9	7,895.5	6,265.2	759.7	2,673.6	3,433.3	Assume 6"-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
B2	2,060	2.33	4,818.4	20k Gal Tanks, Pads	4	172.3	1,315.9	3,502.5	258.5	2,673.6	2,932.1	Assume 6"-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
B3	2,200	2.33	5,125.9	20k Gal Tanks, Pads	4	172.3	1,973.9	3,152.0	275.0	2,673.6	2,948.6	Assume 6"-tall Equipment pad plus 12' dia. tank for remainder of containment wall height
C	8,525	0.67	5,683.5	20k Gal Tanks, Pads, Process Equipment	1	2373.4	1,582.2	4,101.3	1,065.7	2,673.6	3,739.3	Assume depth of Equipment/Pad is full height of containment wall
D	890	14.17	12,666.3	Mixing Hopper	1	203.6	2,885.0	9,781.3	46.4	972.0	1,018.4	Assume height of hopper is full height of containment wall. Use 371 sqft exterior to building for rainfall. Hopper volume of 36CY provided by Owner.

APPENDIX D
TDU SYSTEM CAPACITY

RLC Technologies TDU System Capacity 30.0 MMBTU/HR

MMBTU/HR Required

	Tons per Hour																			
% Water	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
0%	0.692	1.383	2.075	2.767	3.458	4.150	4.842	5.533	6.225	6.917	7.608	8.300	8.992	9.683	10.375	11.067	11.758	12.450	13.142	13.833
5%	0.898	1.796	2.694	3.591	4.489	5.387	6.285	7.183	8.081	8.979	9.877	10.774	11.672	12.570	13.468	14.366	15.264	16.162	17.060	17.957
10%	1.104	2.208	3.312	4.416	5.520	6.624	7.729	8.833	9.937	11.041	12.145	13.249	14.353	15.457	16.561	17.665				
15%	1.310	2.621	3.931	5.241	6.551	7.862	9.172	10.482	11.792	13.103	14.413	15.723	17.034							
20%	1.516	3.033	4.549	6.066	7.582	9.099	10.615	12.132	13.648	15.165	16.681									
25%	1.723	3.445	5.168	6.891	8.613	10.336	12.059	13.781	15.504	17.227										
30%	1.929	3.858	5.787	7.716	9.644	11.573	13.502	15.431	17.360											
35%	2.135	4.270	6.405	8.540	10.675	12.811	14.946	17.081												
40%	2.341	4.683	7.024	9.365	11.706	14.048	16.389													
45%	2.547	5.095	7.642	10.190	12.737	15.285	17.832													
50%	2.754	5.507	8.261	11.015	13.769	16.522														
55%	2.960	5.920	8.880	11.840	14.800	17.759														
60%	3.166	6.332	9.498	12.664	15.831															
65%	3.372	6.745	10.117	13.489	16.862															
70%	3.579	7.157	10.736	14.314	17.893															
75%	3.785	7.569	11.354	15.139																
80%	3.991	7.982	11.973	15.964																
85%	4.197	8.394	12.591	16.788																
90%	4.403	8.807	13.210	17.613																
95%	4.610	9.219	13.829																	
100%	4.816	9.631	14.447																	

**** **MMBTU/HR required estimates above use 60% Thermal Transfer Efficiency and 900Deg F operating temperatures**

Appointment

From: Gerhard, Sasha [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=409F48684EB4422CB13177FC9702D0FA-GERHARD, SASHA]
Sent: 6/8/2017 12:23:20 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Accepted: tdus
Location: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR

Start: 6/14/2017 1:00:00 PM
End: 6/14/2017 2:00:00 PM

Recurrence: (none)

To: rjean@idem.in.gov[rjean@idem.in.gov]
Cc: Valentino, Michael[Valentino.Michael@epa.gov]; Galbraith, Michael[Galbraith.Michael@epa.gov]
From: Lee, Jae
Sent: Wed 5/24/2017 7:00:54 PM
Subject: RE: Tradebe Status

Thanks, Jean.

I will do that.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, May 24, 2017 1:58 PM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

So far, no appeal. Our legal suggested we wait another week to be sure. Send me a reminder next week, and I'll let you know.

From: JEAN, RUTH
Sent: Wednesday, May 24, 2017 1:03 PM
To: 'Lee, Jae' <lee.jae@epa.gov>
Subject: RE: Tradebe Status

I think it's safe to say the appeal deadline was late last week. I haven't heard of an appeal being filed, but sometimes it takes a bit of time for us to be informed. I will check with our legal counsel to see if an appeal has come through. I'll let you know.

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, May 24, 2017 12:53 PM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth,

Do you have anyone petitioned for appeal of the State RCRA final permit for Tradebe?

Does the appeal deadline passed or do we need to wait couple more days? HQ is very anxious to know.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 19, 2017 9:55 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

Jae,

Per our issued guidance: "If you object to this decision issued by the Indiana Department of Environmental Management (IDEM) and are: 1) the person to whom the decision was directed, 2) a party specified by law as being eligible to appeal, or 3) aggrieved or adversely affected by the decision, you are entitled to file an appeal. (An aggrieved or adversely affected person is one who would be considered by the court to be negatively impacted by the decision. If you file an appeal because you feel that you are aggrieved, it will be up to you to demonstrate in your appeal how you are directly impacted in a negative way by the decision)."

If you would like an interpretation of what this means, you should talk with one of our attorneys. I recommend

April Lashbrook. 317-233-1805.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, April 19, 2017 10:47 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Cc: Galbraith, Michael <Galbraith.Michael@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>; Cunningham, Michael <cunningham.michael@epa.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>; NADDY, JOHN <JNADDY@idem.IN.gov>
Subject: RE: Tradebe Status

Thanks, Ruth

So I will take that ETC can appeal the IDEM's draft RCRA permit even if they have not submitted review comments during the comment period, though I am not sure how they can demonstrate they are an adversely affected party.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
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To: Lee, Jae <lee.jae@epa.gov>
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Jae,

If the petitioner can demonstrate that they are an aggrieved or adversely affected party, then they can appeal.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
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To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

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To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

I have not received any comments. If I do, you will see the comments when I respond to them with the issuance of the final decision in approximately 4-6 weeks.

From: Lee, Jae [mailto:lee.jae@epa.gov]

Sent: Tuesday, April 18, 2017 10:41 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth,

I guess the public comment period for the RCRA draft permit for Tardebe is ended.

Was ETC submitted any comments for the draft permit? If they did, can you share with us?

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 12, 2017 10:34 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

No

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, April 12, 2017 11:30 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth
Has the Environmental Technology Council submitted review comments for the State RCRA draft permit for Tradebe?

Jae

From: Lee, Jae
Sent: Monday, April 10, 2017 10:43 AM
To: 'JEAN, RUTH' <RJEAN@idem.IN.gov>
Cc: John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <setnicar.mary@epa.gov>; SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Valentino, Michael <valentino.michael@epa.gov>
Subject: Tradebe Status

Ruth,

I would like to let you know that we received response (mostly CBI) for the information request of the Desorption Units from Tradebe.

We have a meeting scheduled with Tradebe's representatives on April 12 at Chicago to discuss mass balance aspects of the units.

We are also scheduled a conference call with HQ and Region 6 on April 17.

If things are moving well, we might able to send a memo to HQ of the Region 5's position on this permit exemption issue by the end of April or early May.

Please let me know if you have any questions.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Tuesday, February 07, 2017 11:26 AM
To: Lee, Jae <lee.jae@epa.gov>

Cc: Valentino, Michael <Valentino.Michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
Subject: RE: Tradebe waste derived fuel issue

Jae,

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When you called earlier, you asked if Tradebe generates HW fuels from their fuel blending operations, and who utilizes those fuels. For clarification, my answers were in relation to their permitted fuel blending operations only. I want to ensure that you did not think I was discussing the SDS unit.

For future reference, please understand that I cannot answer any questions regarding the SDS units. I am not familiar with the SDS, nor was I involved in the original decision. I can only answer questions regarding their hazardous waste permit.

Thanks,

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Cc: Valentino, Michael
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HQ came up a question that the IDEM's March 31, 2006 letter (attached) states that, in the second page, fifth paragraph,
" If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit".

Since Tradebe generates hazardous waste derived fuels for the blending to send to off-site cement kilns, should they be required to have a treatment permit?

Any thoughts on this? This letter was referenced in the CAA permit.

Jae

Message

From: Lee, Jae [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=6E8957DA9F254AAB83632814F05D1CD2-JLEE10]
Sent: 5/24/2017 5:48:35 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]; Valentino, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=29ccd101653e4a5fae2273a9ae9f7bd0-MValenti]
Subject: FW: Tradebe Status

I will keep update with you the Tradebe's appeal status.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, May 24, 2017 12:03 PM
To: Lee, Jae <lee.jae@epa.gov>
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Cc: John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <setnicar.mary@epa.gov>; SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Valentino, Michael <valentino.michael@epa.gov>
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Cc: Valentino, Michael <Valentino.Michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
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Thanks,

Ruth

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Since Tradebe generates hazardous waste derived fuels for the blending to send to off-site cement kilns, should they be required to have a treatment permit?

Any thoughts on this? This letter was referenced in the CAA permit.

Jae

To: Galbraith, Michael[Galbraith.Michael@epa.gov]
From: Lee, Jae
Sent: Thur 10/27/2016 4:32:01 PM
Subject: Automatic reply: Background paper on Tradebe

I will be out of office. I will get back to you when I return on October 31, 2016.
If you need an immediate assistance, please contact Mary Setnicar (setnicar.mary@epa.gov, 312-886-0976). Thank you

Appointment

From: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=USER7EF195FB]
Sent: 6/7/2017 4:16:56 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Accepted: tdus
Location: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR

Start: 6/14/2017 1:00:00 PM
End: 6/14/2017 2:00:00 PM

Recurrence: (none)

Your request was accepted.

Sent by Microsoft Exchange Server 2016

To: Galbraith, Michael[Galbraith.Michael@epa.gov]; Valentino, Michael[Valentino.Michael@epa.gov]
From: Lee, Jae
Sent: Wed 5/24/2017 4:53:28 PM
Subject: RE: tradebe

I will check with State and let you know the status.

Jae

From: Galbraith, Michael
Sent: Wednesday, May 24, 2017 11:48 AM
To: Lee, Jae <lee.jae@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>
Subject: tradebe

I think the deadline to challenge tradebe's permit was last week or the week before. Could you verify that nobody challenged the final permit?

Thanks!

Mike Galbraith
Permits Branch (5303P)
Program Implementation/Information Division
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

(703) 605-0567

To: John Naddy[jnaddy@idem.in.gov]
Cc: rjean@idem.in.gov[rjean@idem.in.gov]; Valentino, Michael[Valentino.Michael@epa.gov]; Setnicar, Mary[Setnicar.Mary@epa.gov]; Galbraith, Michael[Galbraith.Michael@epa.gov]
From: Lee, Jae
Sent: Tue 2/7/2017 8:46:43 PM
Subject: RE: Tradebe waste derived fuel issue

John,

Thank you for the response.

I think the question is not that of EPA's approach, but the IDEM's statement of " If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit" in the March 31, 2006 letter."

Since the SDS generates wastewater (the derived hazardous waste) which is blended with other fuels(or hazardous waste) to be burned in the off-site kilns as fuels, whether this practice would contradict with the above statement.

Jae

From: NADDY, JOHN [mailto:JNADDY@idem.IN.gov]
Sent: Tuesday, February 07, 2017 1:54 PM
To: Lee, Jae <lee.jae@epa.gov>
Cc: rjean@idem.in.gov; Valentino, Michael <Valentino.Michael@epa.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
Subject: RE: Tradebe waste derived fuel issue

Mr. Lee-

I did not understand your second question.

As I understand it, the SDS unit is a distillation unit that reclaims and produces solvents which are subsequently sold for use as solvents. Water is produced during the operation of the unit is in turn used in the operation of the unit. When excess water has been produced or when the unit is taken out of service, the water is drawn off the unit. That water contains lighter components that are not easily separated and, as a newly generated waste, is blended with hazardous waste fuels.

I would like to stress that the unit is a solvent distillation unit operated to produce marketable solvent and not to generate hazardous waste derived fuels.

From the approach that you (EPA) appear to be taking, any distillation unit being operated as a distillation unit - generating wastes during the distillation process and disposing of those wastes as a hazardous waste fuel would require a hazardous waste treatment permit. Is this how Region V and headquarter are approaching distillation units?

John Naddy
Technical Environmental Specialist
Compliance and Response Branch
Office of Land Quality
Indiana Department of Environmental Management
317-233-0404

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, February 07, 2017 2:01 PM
To: JEAN, RUTH
Cc: Valentino, Michael; NADDY, JOHN; Setnicar, Mary
Subject: RE: Tradebe waste derived fuel issue

Thanks Ruth for clarification.

John, do you know whether the SDS unit generates hazardous waste derived fuel which would be blended with other waste to be used as a fuel at the off-site cement kilns for energy recovery?

If it does, will this would be contract the IDEM's statement specified below?
" If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit".

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Tuesday, February 07, 2017 11:26 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: Valentino, Michael <Valentino.Michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
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Ruth

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To: JEAN, RUTH
Cc: Valentino, Michael
Subject: Tradebe waste derived fuel issue

Ruth,

HQ came up a question that the IDEM's March 31, 2006 letter (attached) states that, in the second page, fifth paragraph,
" If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit".

Since Tradebe generates hazardous waste derived fuels for the blending to send to off-site cement kilns, should they be required to have a treatment permit?

Any thoughts on this? This letter was referenced in the CAA permit.

Jae

Message

From: Kohler, Amanda [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=665A6CDD3371457FB03D5184F58F7A4A-KOHLER, AMANDA]
Sent: 1/24/2017 7:11:00 PM
To: Atagi, Tracy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ebcfd670077440dfb63a691749f20af2-TATAGI]; Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]
Subject: Tradebe discussion with ETC about to begin....

If you'd like to join us in Barnes' conf room!

Amanda

To: Galbraith, Michael[Galbraith.Michael@epa.gov]; fyip@cdc.gov[fyip@cdc.gov]
From: Lee, Jae
Sent: Tue 1/24/2017 6:21:31 PM
Subject: FW: Tradebe Information Request Letter

From: Lee, Jae
Sent: Wednesday, December 14, 2016 9:50 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Cc: Setnicar, Mary <setnicar.mary@epa.gov>; Valentino, Michael <valentino.michael@epa.gov>; Cunningham, Michael <cunningham.michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>
Subject: RE: Tradebe Information Request Letter

Thank you Ruth.

We will amend the letter per your request and send to Tradebe from EPA.

Please inform us for any tentative date of the issuance of draft permit to Traedebe.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, December 14, 2016 6:27 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: Setnicar, Mary <Setnicar.Mary@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>; Cunningham, Michael <cunningham.michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>
Subject: RE: Tradebe Information Request Letter

Jae,

I discussed your request with John Naddy in our compliance section. As I have indicated to you before, our compliance section makes recycling process exclusion determinations. As you know, IDEM's position on Tradebe's SDS unit has previously been questioned by the Environmental Technology Council (ETC) in 2006, and twice responded to by Dave Berrey (since retired from our compliance section). Each response was signed by IDEM's commissioner. IDEM's March 31, 2006 response to ETC indicated that EPA R5 staff had also evaluated the SDS.

According to John, our position continues to be that Tradebe's SDS unit meets the recycling process exclusion at 40 CFR 261.6(c)(1). As such, I agree with John that this matter is between EPA and Tradebe, and we will not be providing comments. However, we did note that your request for information references Tradebe submittals to IDEM. We have not seen these documents, and believe they may have been provided to IDEM's NW regional office inspector. I assume they were provided to EPA as well since you are commenting on these Tradebe submittals. As such, we request you indicate that these documents were provided to EPA.

If you have any specific questions, I recommend you contact John Naddy directly. John has the technical expertise to address your questions regarding the recycling process exclusion.

Thanks,

Ruth

Ruth A. Jean
Senior Environmental Manager
IN Dept. of Environmental Management
Office of Land Quality
Hazardous Waste Permit Section

rjean@idem.in.gov
317.232.3398 direct
www.IN.gov/IDEM

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, December 13, 2016 11:04 AM
To: JEAN, RUTH
Cc: Setnicar, Mary; Valentino, Michael; Cunningham, Michael
Subject: RE: Tradebe Information Request Letter

Thank you Ruth for the response.

The question list is attached. Please let me know if you have any comments by 12/15.

Thank you

To: Galbraith, Michael[Galbraith.Michael@epa.gov]
From: Lee, Jae
Sent: Tue 1/24/2017 6:20:49 PM
Subject: FW: Tradebe Information Request Letter

Our consultation with IDEM for Tradebe issue.

See the email below.

Jae

From: Lee, Jae
Sent: Tuesday, December 13, 2016 10:04 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Cc: Setnicar, Mary <setnicar.mary@epa.gov>; Valentino, Michael <valentino.michael@epa.gov>; Cunningham, Michael <cunningham.michael@epa.gov>
Subject: RE: Tradebe Information Request Letter

Thank you Ruth for the response.

The question list is attached. Please let me know if you have any comments by 12/15.

Thank you

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Tuesday, December 13, 2016 5:53 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: Setnicar, Mary <Setnicar.Mary@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>; Cunningham, Michael <cunningham.michael@epa.gov>
Subject: RE: Tradebe Information Request Letter

Jae,

This particular issue has historically been handled by our compliance section, by issuing the original determination that the unit is exempt from permitting, and subsequent correspondence with the Environmental Technology Council.

My recommendation is that you proceed with the second option. Please forward me the questions you intend to ask Tradebe, and I will seek input from our compliance section.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Monday, December 12, 2016 1:55 PM
To: JEAN, RUTH
Cc: Setnicar, Mary; Valentino, Michael; Cunningham, Michael
Subject: Tradebe Information Request Letter

Ruth:

As you may know, we are in the process of consulting to the EPA-HQ for the exemption status of the Solids Distillation System (SDS) operated at Tradebe Environmental Services (Tradebe), East Chicago, Indiana.

We have reviewed the Tradebe Treatment and Recycling, LLC Business and SDS System Information, submitted by Tradebe, dated October 11, 2016, Confidential Business Information (CBI) and non-CBI information.

Based on the review of the October 11, 2016 information, we compiled more questions to request additional data and information to Tradebe.

It is a general opinion that this would be a permitting issue since the question is whether the SDS should be permitted or not. Since the authority in the permitting has been delegated to the State, we would like to discuss with IDEM how the information request can be sent to the Tradebe.

It seems there are two options to be considered:

- IDEM can send out these questions to Tradebe. The questions can be modified per IDEM's review and sent to Tradebe "informally" or formally as a part of Part B review process to Tradebe. IDEM would have Tradebe send its responses to IDEM with a copy to EPA subject to any CBI claims.
- EPA can send these out as an "informal" request to Tradebe. Before we do, EPA can share the questions beforehand with IDEM to receive any comments if any. We would ask Tradebe to send its responses to both EPA and IDEM (subject to any CBI claims).

We would like to send this information request to Tradebe as early as we can.

Please let me know your thoughts on this matter.

Jae

To: Galbraith, Michael[Galbraith.Michael@epa.gov]
From: Lee, Jae
Sent: Thur 12/1/2016 1:32:15 PM
Subject: Automatic reply: Tradebe

I will be out of office. I will get back to you when I return on December 2, 2016.
If you need an immediate assistance, please contact Mary Setnicar (setnicar.mary@epa.gov, 312-886-0976). Thank you

Message

From: Lee, Jae [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=6E8957DA9F254AAB83632814F05D1CD2-JLEE10]
Sent: 1/19/2017 10:10:34 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]; Valentino, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=29ccd101653e4a5fae2273a9ae9f7bd0-MValenti]; Cunningham, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0ce197b42b574909995fe91bdfe04ba6-MCunning]; Setnicar, Mary [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b4cedae7b8aa4f3b968d7a6a40de75ec-MSetnica]
Subject: FW: Tradebe Draft Permit Renewal

IDEM informed us that they are planning to issue tentatively a draft permit to Tradebe in February 2017.

As I indicated before, Tradebe would submit their response for our information request in middle February.

Should we ask the IDEM to hold on their draft permit issuance until we would come up a certain determination for the exemption issue?

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Thursday, January 19, 2017 10:19 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: Tradebe Draft Permit Renewal

I am tentatively planning to issue Tradebe's Draft Permit Renewal by the end of February 2017. I will let you know if we are significantly delayed.

Thanks,

Ruth

Ruth A. Jean
Senior Environmental Manager
IN Dept. of Environmental Management
Office of Land Quality
Hazardous Waste Permit Section
rjean@idem.in.gov
317.232.3398 direct
www.IN.gov/IDEM

Appointment

From: Young, Jessica [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=26404C78D3DC441F810AC723CF8F9D49-JBIEGELS]
Sent: 1/19/2017 6:59:53 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Tentative: meeting to discuss ETC's concerns about Tradebe
Location: DCRoomPYS6100Projector/DC-Potomac-Yard-South-ORCR

Start: 1/25/2017 6:00:00 PM
End: 1/25/2017 7:00:00 PM
Show Time As: Busy

Appointment

From: Celeste, Laurel [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=8F5194A050CE4B758E02E6835FE0B43D-CELESTE, LAUREL]
Sent: 1/19/2017 6:54:04 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Accepted: meeting to discuss ETC's concerns about Tradebe
Location: DCRoomPYS6100Projector/DC-Potomac-Yard-South-ORCR

Start: 1/25/2017 6:00:00 PM
End: 1/25/2017 7:00:00 PM

Recurrence: (none)

Appointment

From: DCRoomPYS6100Projector/DC-Potomac-Yard-South-ORCR [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=USER8C17DD2E]
Sent: 1/19/2017 6:11:23 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Accepted: meeting to discuss ETC's concerns about Tradebe
Location: DCRoomPYS6100Projector/DC-Potomac-Yard-South-ORCR

Start: 1/25/2017 6:00:00 PM
End: 1/25/2017 7:00:00 PM

Recurrence: (none)

Your request was accepted.

Sent by Microsoft Exchange Server 2016

Message

From: Guernica, Mimi [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=6C8A7D898ED74B678830C17EE521A045-MGUERNIC]
Sent: 1/19/2017 4:22:41 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]
CC: Kaps, Melissa [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=2fd9ca1cc4f145df83c8bdd2b683a290-mkaps]; Kohler, Amanda [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=665a6cdd3371457fb03d5184f58f7a4a-Kohler, Amanda]
Subject: FW: TDUs
Attachments: removed.txt

David Case explanation of legal rationale for threatened suit.

From: Johnson, Barnes
Sent: Wednesday, January 18, 2017 5:43 PM
To: Devlin, Betsy <Devlin.Betsy@epa.gov>; Elliott, Ross <Elliott.Ross@epa.gov>; Sasseville, Sonya <Sasseville.Sonya@epa.gov>; Guernica, Mimi <Guernica.Mimi@epa.gov>; ORCR IO <ORCR_IO@epa.gov>
Cc: Michaud, John <Michaud.John@epa.gov>; Lewis, Jen <Lewis.Jen@epa.gov>
Subject: FW: TDUs

FYI – at the eManifest FACA meeting last week I asked David the specifics of his threatened suit. He offered to send me an email to explain. The discussion below outlines the basis of including EPA as a defendant in his threatened citizen suit.

Barnes Johnson
USEPA | Resource Conservation and Recovery | Tel 703-308-8895 | johnson.barnes@epa.gov | @EPAland

From: David Case [mailto:dcase@etc.org]
Sent: Tuesday, January 17, 2017 2:59 PM
To: Johnson, Barnes <Johnson.Barnes@epa.gov>
Subject: TDUs

Barnes,

You asked me last week to explain the legal basis for including EPA in the citizen suit that has been drafted. Here is a short summary:

RCRA Section 3007 requires the Administrator or authorized state "to thoroughly inspect every facility for the treatment, storage, or disposal of hazardous waste for which a [RCRA] permit is required" at least every two years. RCRA uses the word "shall" which makes this inspection requirement a mandatory, non-discretionary duty. Upon information and belief, EPA has not conducted a RCRA inspection of the thermal desorption units (TDUs), nor has the State of Indiana.

In addition, RCRA Section 3005 requires a permit for the thermal treatment and disposal of hazardous wastes in the TDUs, and the regulatory exemption for recycling units does not apply. Because the facility does have a RCRA permit for its other hazardous waste activities, but not for thermal treatment and destruction of hazardous wastes in the TDUs, the

Administrator also has a non-discretionary duty to revoke the facility's RCRA permit. RCRA Section 3005(e) provides: "Upon a determination by the Administrator … of noncompliance by a facility having a permit under this chapter with the requirements of this section …, the Administrator … shall revoke such permit." The facility is in noncompliance with the requirements of RCRA section 3005 to obtain a RCRA permit for operation of the TDUs or to include the TDUs within its current permit. RCRA Section 3005(e) uses the word "shall" which makes permit revocation a mandatory, non-discretionary duty.

EPA can satisfy its non-discretionary duties under RCRA by conducting a thorough inspection of the TDUs' operations and including the TDUs within the facility's current or renewed RCRA permit. We believe the facility's RCRA permit is scheduled for renewal this year.

David R. Case
Executive Director
1112 16th Street NW, Suite 420
Washington DC 20036
(202) 783-0870 x201

- Environmental Technology Council

To: rjean@idem.in.gov[rjean@idem.in.gov]
Cc: Galbraith, Michael[Galbraith.Michael@epa.gov]; Valentino, Michael[Valentino.Michael@epa.gov]; Cunningham, Michael[cunningham.michael@epa.gov]; Setnicar, Mary[Setnicar.Mary@epa.gov]; John Naddy[jnaddy@idem.in.gov]
From: Lee, Jae
Sent: Wed 4/19/2017 2:46:44 PM
Subject: RE: Tradebe Status

Thanks, Ruth

So I will take that ETC can appeal the IDEM's draft RCRA permit even if they have not submitted review comments during the comment period, though I am not sure how they can demonstrate they are an adversely affected party.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 19, 2017 9:33 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

Jae,

If the petitioner can demonstrate that they are an aggrieved or adversely affected party, then they can appeal.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, April 19, 2017 9:49 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth,

One other questions is that can ETC appeal your permit of they have not submitted comment during the public comment period? The federal rule is that only the people who has submitted comment during the public comment period can appeal the permit to the portion of the permit they hhave commented.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 19, 2017 5:17 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

I have not received any comments. If I do, you will see the comments when I respond to them with the issuance of the final decision in approximately 4-6 weeks.

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, April 18, 2017 10:41 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth,

I guess the public comment period for the RCRA draft permit for Tardebe is ended.

Was ETC submitted any comments for the draft permit? If they did, can you share with us?

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 12, 2017 10:34 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

No

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, April 12, 2017 11:30 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth
Has the Environmental Technology Council submitted review comments for the State RCRA draft permit for Tradebe?

Jae

From: Lee, Jae
Sent: Monday, April 10, 2017 10:43 AM
To: 'JEAN, RUTH' <RJEAN@idem.IN.gov>
Cc: John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <setnicar.mary@epa.gov>; SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Valentino, Michael <valentino.michael@epa.gov>
Subject: Tradebe Status

Ruth,

I would like to let you know that we received response (mostly CBI) for the information request of the Desorption Units from Tradebe.

We have a meeting scheduled with Tradebe's representatives on April 12 at Chicago to discuss mass balance aspects of the units.

We are also scheduled a conference call with HQ and Region 6 on April 17.

If things are moving well, we might able to send a memo to HQ of the Region 5's position on this permit exemption issue by the end of April or early May.

Please let me know if you have any questions.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Tuesday, February 07, 2017 11:26 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: Valentino, Michael <Valentino.Michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
Subject: RE: Tradebe waste derived fuel issue

Jae,

As I've informed you before, any questions related to the SDS decision should be directed to John Naddy.

When you called earlier, you asked if Tradebe generates HW fuels from their fuel blending operations, and who utilizes those fuels. For clarification, my answers were in relation to their permitted fuel blending operations only. I want to ensure that you did not think I was discussing the SDS unit.

For future reference, please understand that I cannot answer any questions regarding the SDS units. I am not familiar with the SDS, nor was I involved in the original decision. I can only answer questions regarding their hazardous waste permit.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, February 07, 2017 11:33 AM
To: JEAN, RUTH
Cc: Valentino, Michael
Subject: Tradebe waste derived fuel issue

Ruth,

HQ came up a question that the IDEM's March 31, 2006 letter (attached) states that, in the second page, fifth paragraph,
" If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit".

Since Tradebe generates hazardous waste derived fuels for the blending to send to off-site cement kilns, should they be required to have a treatment permit?

Any thoughts on this? This letter was referenced in the CAA permit.

Jae

To: rjean@idem.in.gov[rjean@idem.in.gov]; Galbraith, Michael[Galbraith.Michael@epa.gov]
Cc: Setnicar, Mary[Setnicar.Mary@epa.gov]; Valentino, Michael[Valentino.Michael@epa.gov]; Victorine, Gary[victorine.gary@epa.gov]; John Naddy[jnaddy@idem.in.gov]
From: Lee, Jae
Sent: Wed 4/19/2017 1:53:22 PM
Subject: RE: Tradebe Status State draft RCRA permit

Thank you Ruth, my typo.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 19, 2017 8:52 AM
To: Lee, Jae <lee.jae@epa.gov>; Galbraith, Michael <Galbraith.Michael@epa.gov>
Cc: Setnicar, Mary <Setnicar.Mary@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>; Victorine, Gary <victorine.gary@epa.gov>; John Naddy <jnaddy@idem.in.gov>
Subject: RE: Tradebe Status State draft RCRA permit

Jae,

Your email below provided the incorrect date. The public comment period ended on April 17th.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
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To: Galbraith, Michael <Galbraith.Michael@epa.gov>
Cc: Setnicar, Mary <Setnicar.Mary@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>; JEAN, RUTH <RJEAN@idem.IN.gov>; Victorine, Gary <victorine.gary@epa.gov>; NADDY, JOHN <JNADDY@idem.IN.gov>
Subject: Tradebe Status State draft RCRA permit

Mike G.,

It seems ETC has not submitted a review comment of the State RCRA draft permit renewal for Tradebe issued on March 3, 2017. The public comment period ended on March 17, 2017. We might need to wait several more days to make sure of the submittal of ETC's comments. We will inform you soon if ETC ever submitted comment for the IDEM draft RCRA permit.

The IDEM is planning to issue a final RCRA permit within approximately 4 to 6 weeks.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 19, 2017 5:17 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

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Sent: Wednesday, April 12, 2017 10:34 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

No

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Sent: Wednesday, April 12, 2017 11:30 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth
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Jae

From: Lee, Jae
Sent: Monday, April 10, 2017 10:43 AM
To: 'JEAN, RUTH' <RJEAN@idem.IN.gov>
Cc: John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <setnicar.mary@epa.gov>; SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Valentino, Michael <valentino.michael@epa.gov>
Subject: Tradebe Status

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Please let me know if you have any questions.

Jae

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Sent: Tuesday, February 07, 2017 11:26 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: Valentino, Michael <Valentino.Michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
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Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, February 07, 2017 11:33 AM
To: JEAN, RUTH
Cc: Valentino, Michael
Subject: Tradebe waste derived fuel issue

Ruth,

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" If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit".

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Any thoughts on this? This letter was referenced in the CAA permit.

Jae

To: Lee, Jae[lee.jae@epa.gov]; Galbraith, Michael[Galbraith.Michael@epa.gov]
Cc: Setnicar, Mary[Setnicar.Mary@epa.gov]; Valentino, Michael[Valentino.Michael@epa.gov]; Victorine, Gary[victorine.gary@epa.gov]; John Naddy[jnaddy@idem.in.gov]
From: JEAN, RUTH
Sent: Wed 4/19/2017 1:51:42 PM
Subject: RE: Tradebe Status State draft RCRA permit

Jae,

Your email below provided the incorrect date. The public comment period ended on April 17th.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, April 19, 2017 9:34 AM
To: Galbraith, Michael <Galbraith.Michael@epa.gov>
Cc: Setnicar, Mary <Setnicar.Mary@epa.gov>; Valentino, Michael <Valentino.Michael@epa.gov>; JEAN, RUTH <RJEAN@idem.IN.gov>; Victorine, Gary <victorine.gary@epa.gov>; NADDY, JOHN <JNADDY@idem.IN.gov>
Subject: Tradebe Status State draft RCRA permit

Mike G.,

It seems ETC has not submitted a review comment of the State RCRA draft permit renewal for Tradebe issued on March 3, 2017. The public comment period ended on March 17, 2017. We might need to wait several more days to make sure of the submittal of ETC's comments. We will inform you soon if ETC ever submitted comment for the IDEM draft RCRA permit.

The IDEM is planning to issue a final RCRA permit within approximately 4 to 6 weeks.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 19, 2017 5:17 AM
To: Lee, Jae <lee.jae@epa.gov>
Subject: RE: Tradebe Status

I have not received any comments. If I do, you will see the comments when I respond to them with the issuance of the final decision in approximately 4-6 weeks.

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, April 18, 2017 10:41 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth,

I guess the public comment period for the RCRA draft permit for Tardebe is ended.

Was ETC submitted any comments for the draft permit? If they did, can you share with us?

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Wednesday, April 12, 2017 10:34 AM
To: Lee, Jae <lee.jae@epa.gov>

Subject: RE: Tradebe Status

No

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Wednesday, April 12, 2017 11:30 AM
To: JEAN, RUTH <RJEAN@idem.IN.gov>
Subject: RE: Tradebe Status

Ruth
Has the Environmental Technology Council submitted review comments for the State RCRA draft permit for Tradebe?

Jae

From: Lee, Jae
Sent: Monday, April 10, 2017 10:43 AM
To: 'JEAN, RUTH' <RJEAN@idem.IN.gov>
Cc: John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <setnicar.mary@epa.gov>; SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Valentino, Michael <valentino.michael@epa.gov>
Subject: Tradebe Status

Ruth,

I would like to let you know that we received response (mostly CBI) for the information request of the Desorption Units from Tradebe.

We have a meeting scheduled with Tradebe's representatives on April 12 at Chicago to discuss mass balance aspects of the units.

We are also scheduled a conference call with HQ and Region 6 on April 17.

If things are moving well, we might able to send a memo to HQ of the Region 5's position on this permit exemption issue by the end of April or early May.

Please let me know if you have any questions.

Jae

From: JEAN, RUTH [mailto:RJEAN@idem.IN.gov]
Sent: Tuesday, February 07, 2017 11:26 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: Valentino, Michael <Valentino.Michael@epa.gov>; John Naddy <jnaddy@idem.in.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
Subject: RE: Tradebe waste derived fuel issue

Jae,

As I've informed you before, any questions related to the SDS decision should be directed to John Naddy.

When you called earlier, you asked if Tradebe generates HW fuels from their fuel blending operations, and who utilizes those fuels. For clarification, my answers were in relation to their permitted fuel blending operations only. I want to ensure that you did not think I was discussing the SDS unit.

For future reference, please understand that I cannot answer any questions regarding the SDS units. I am not familiar with the SDS, nor was I involved in the original decision. I can only answer questions regarding their hazardous waste permit.

Thanks,

Ruth

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Tuesday, February 07, 2017 11:33 AM
To: JEAN, RUTH
Cc: Valentino, Michael
Subject: Tradebe waste derived fuel issue

Ruth,

HQ came up a question that the IDEM's March 31, 2006 letter (attached) states that, in the second page, fifth paragraph,
" If the unit was used to produce fuels or merely for treatment, the unit would require a HW treatment permit".

Since Tradebe generates hazardous waste derived fuels for the blending to send to off-site cement kilns, should they be required to have a treatment permit?

Any thoughts on this? This letter was referenced in the CAA permit.

Jae

Appointment

From: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=USER7EF195FB]
Sent: 4/18/2017 5:32:25 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Accepted: tradebe conf call
Location: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR

Start: 4/18/2017 6:00:00 PM
End: 4/18/2017 7:00:00 PM

Recurrence: (none)

Your request was accepted.

Sent by Microsoft Exchange Server 2016

Appointment

From: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=USER7EF195FB]
Sent: 6/6/2017 1:53:46 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]

Subject: Accepted: tdu round 3
Location: DCRoomPYS6731/DC-Potomac-Yard-South-ORCR

Start: 6/7/2017 1:00:00 PM
End: 6/7/2017 2:00:00 PM

Recurrence: (none)

Your request was accepted.

Sent by Microsoft Exchange Server 2016

From:	Lee, Jae
Location:	1713 for R5 staffs
Importance:	High
Subject:	Canceled: Discussion with Region 5, Region 6 and HQ of the Thermal Desorption System for its RCRA permit Exemption status
Start Time:	Wed 4/5/2017 4:30:00 PM
End Time:	Wed 4/5/2017 5:30:00 PM
Required Attendees:	Setnicar, Mary; Cunningham, Michael; Valentino, Michael; Victorine, Gary; Shah, Harry; Fruitwala, Kishor; Galbraith, Michael; Chow, Kevin; Atagi, Tracy; Tidmore, Guy; R5LCD-ConfCallLine-RCRA/Conference-Call-Line/R5-LCD

This call will be rescheduled on 4/18/2017, 1:00 pm, CDT.

To: Lee, Jae[lee.jae@epa.gov]; Galbraith, Michael[Galbraith.Michael@epa.gov]
Cc: Valentino, Michael[Valentino.Michael@epa.gov]; Cunningham, Michael[cunningham.michael@epa.gov]; Chow, Kevin[chow.kevin@epa.gov]; Setnicar, Mary[Setnicar.Mary@epa.gov]; rjean@idem.in.gov[rjean@idem.in.gov]
From: SCHROER, CRAIG
Sent: Fri 12/16/2016 5:21:15 PM
Subject: RE: Tradebe Information Request Letter

Jae, I already spoke with Tita this morning. We are doing the same and waiting to hear from her with more information about their claims. Thanks!

Craig Schroer, Chief
Hazardous Waste Permits Section
Office of Land Quality
Indiana Department of Environmental Management
100 N. Senate Ave, IGCN 1154
Indianapolis, IN 46204-2251
Ph. (317) 234-0974
Fax (317) 232-3403
cschroer@idem.IN.gov

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Friday, December 16, 2016 12:06 PM
To: SCHROER, CRAIG; Galbraith, Michael
Cc: Valentino, Michael; Cunningham, Michael; Chow, Kevin; Setnicar, Mary
Subject: FW: Tradebe Information Request Letter

Craig and Mike,

As you can see the emails below, the December 15, 2016 Information Request letter for Tradebe's SDS system might contains a CBI as claimed by tradebe. Since we don't have any specific information about the confidential nature of the letter, we can't mark the Letter as a CBI.

However, please don't release the letter to the public until we receive more specific information of the letter for its CBI nature.

If you receive any FOIA request of the letter, please let us know.

Thank you for your cooperation in this matter.

Jae Lee

From: Tita LaGrimas [mailto:Tita.LaGrimas@tradebe.com]
Sent: Friday, December 16, 2016 11:01 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
Subject: RE: Tradebe Information Request Letter

Thank you Jae and I apologize. In my hast of generating my email to you to protect the confidential information I meant to include a statement that we are presently reviewing the USEPA's questions and will identify today the questions that contain confidential information.
I will get right back to you.
Respectfully,
Tita

Tita LaGrimas
Executive VP of Regulatory Affairs
Tradebe Environmental Services, LLC

1433 E 83rd Ave, Suite 200
Merrillville, IN 46410 United States
Office: +1 (219) 354-2352
www.tradebeusa.com

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Friday, December 16, 2016 10:57 AM
To: Tita LaGrimas
Cc: SCHROER, CRAIG; Setnicar, Mary
Subject: RE: Tradebe Information Request Letter

Tita, Thank you for letting us know the potential confidential nature of the information request letter dated December 15, 2016.

Since your email contains no specific information about which questions are potentially confidential nature, we cant's mark the entire December 15, 2016 Information request letter as a confidential business information (CBI) at this time. However, with respect to your claim, we will not release this letter to the public until you submit more specific information about the types of CBI questions in the letter.

When you submit a response for the letter, you can certainly request EPA to mark certain types of questions as CBI of the December 15, 2016 letter.

If we receive any Freedom of Information Act (FOIA) request of the letter, we can contact you first for any additional information about your claim of the CBI of the letter.

Please let us know the tentative response submittal date of the Information Request.
After we receive the Tradebe's response, we can arrange a meeting to discuss the submitted response.

Thank you

Jae Lee

From: Tita LaGrimas [mailto:Tita.LaGrimas@tradebe.com]
Sent: Friday, December 16, 2016 10:06 AM
To: Lee, Jae <lee.jae@epa.gov>
Cc: SCHROER, CRAIG <CSCHROER@idem.IN.gov>; Setnicar, Mary <Setnicar.Mary@epa.gov>
Subject: RE: Tradebe Information Request Letter

Good morning Jae,

Tradebe is looking forward to continue working with USEPA Region 5, once the information is provided Tradebe would like to come Region 5's office to review our responses with you.

To follow up on our telephone conversation this morning there are several items contained in USEPA's letter that are related to Tradebe's confidential information (information submitted to Region 5 and IDEM in accordance with State and Federal Confidentiality Requirements), therefore I respectfully request we maintain USEPA's letter as confidential document and not available to the public.

Please let me know if you have any questions or we need to discuss this further, I can be reached at 219.746.8713.

Thank you for your time and consideration.
Respectfully,
Tita

Tita LaGrimas
Executive VP of Regulatory Affairs
Tradebe Environmental Services, LLC

1433 E 83rd Ave, Suite 200
Merrillville, IN 46410 United States
Office: +1 (219) 354-2352
www.tradebeusa.com

From: Lee, Jae [mailto:lee.jae@epa.gov]
Sent: Thursday, December 15, 2016 9:57 AM
To: Tita LaGrimas
Cc: SCHROER, CRAIG; Setnicar, Mary
Subject: Tradebe Information Request Letter

Tita,

The information request letter for Tradebe is attached.

If you need an original letter and/or word-version of the letter, please let me know.

Jae Lee
RCRA/Tsca Section
EPA Region 5
312-886-3781

Message

From: Oneal, Katherine [katherine.oneal@ncdenr.gov]
Sent: 6/23/2017 8:58:26 PM
To: Galbraith, Michael [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=0abf7f5c1a5e462e8096cb58ef9757eb-MGALBRAI]
Subject: Facilities with TDUs - request for info
Attachments: DART WWTULetter 2013.pdf; WWT_ProcessFlowDiagram_fromFinalDARTHWMPermitApplication.pdf; P&ID with thermal.pdf

Mike,

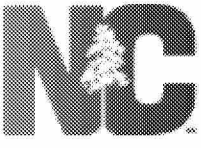
North Carolina has a unit that appears to be the type of TDU that you are asking about. The facility is DART Acquisitions, LLC (NCD 121 700 777) in Charlotte, NC. The unit is part of their hazardous wastewater treatment system and was determined to be exempt from RCRA permitting. The following is the description they included in the RCRA permit. Also attached is a flow diagram from the RCRA permit and the letter requesting approval of the WWTU exemption which includes a description of the system.

"Thermal stripping of volatile organics in conjunction with an air stripper is a process in which wastewater contaminated with a low percentage of solvents(2-4%) are place into the unit that is under constant vacuum and heat is applied to slightly elevate the temperature of the wastewater between 100 and 120$_0$ F to hasten the stripping process.. The wastewater is then sent through an air stripper to remove any residual volatile organics prior to discharge into the sewer system."

Katherine O'Neal
Engineer
Division of Waste Management/Hazardous Waste Section
North Carolina Department of Environmental Quality

919 707 8209 office
katherine.oneal@ncdenr.gov

217 West Jones Street
1646 Mail Service Center
Raleigh, NC 27699-1646



DISPOSAL AND RECYCLING TECHNOLOGIES, INC.
4132 Pompano Road, Charlotte, NC 28216 Phone: 704/395-9559 Fax: 704/395-9579

July 12, 2013

CERTIFIED MAIL/RETURN RECEIPT
7011 0470 0000 6707 7007

Ms. Katherine O'Neal
North Carolina Department of Environment and Natural Resources
Hazardous Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Re: Wastewater Treatment Unit Exemption Determination

Dear Ms. O'Neal:

I am enclosing a copy of a letter received from the Charlotte Mecklenburg Utility Department System Protection Division authorizing DART Acquisitions, LLC (DART) to construct and install additional wastewater pretreatment equipment at its Charlotte facility located at 4132 Pompano Road. The equipment as described in their approval letter is for the removal or stripping of volatile organic compounds in contaminated wastewater using conventional wastewater treatment technologies recognized and used by both industry and EPA superfund waste sites.

Since these units are being used for wastewater pretreatment and recognized as such by Charlotte's sewer authority they will be managed under the wastewater treatment unit exemption. This is based on the fact these units meet the three-part definition of a "*wastewater treatment unit*" as define in 260.10 outlined below:

(1) These units are part of a wastewater treatment facility subject to regulations under Section 307(b) of the Clean Water Act for facilities that discharge to publicly owned treatment works (POTW). DART operates under a wastewater discharge permit issued by the Charlotte Mecklenburg Utility Department (POTW).

(2) These units will receive and treat or store an influent wastewater that is hazardous waste as defined in 261.3.

(3) These units meet the definition of a tank and/or tank system as defined in 260.10.

The influent waste will be substantially water with a few percent volatile organic compounds (VOC) ranging from one percent to four percent. The thermal vacuum stripper operates on the principle of removing volatile organics by slightly elevating the temperature of the contaminated wastewater and reducing the atmospheric pressure by a vacuum pump. Under these two conditions it greatly increases the capability of VOC removal through vaporization. The vapors passing through a condenser are liquefied and collected for use as a product solvent or used in DART'S outbound supplemental fuels program. The air stripper is used in conjunction with the thermal vacuum stripper to remove any residual volatiles. A copy of the process flow diagram and unit layout is enclosed. These drawings were submitted in DART's hazardous waste permit reapplication on April 30, 2013.

DART is requesting the Department's concurrence for our wastewater treatment unit exemption determination based on the above criteria.

Should have any questions regarding the above, please contact me at 704-395-9559.

Sincerely,

James Kreger

James Kreger, CHMM
Compliance Manager

Enclosures

DART ACQUISITIONS, LLC
4132 Pompano Rd. Charlotte NC

WWTP P&ID Drawing

REVISIONS	
Revision 1, Apr 2022	
Revision 2, Nov 2022	
DRART	
DRN: RLE	DATE: Apr 05, 2022
DESIGN BY: RB	SCALE: N.T.S.
APPROVED BY: JB	SHEET NO. 1 OF 1 SHEETS

LEGEND

- = 3" Sch 80 – PVC Pipe
- = 4" Sch 40 – C.S. Pipe
- = 2" Sch 40 – C.S. Pipe
- = 6" Sch 80 – PVC Pipe
- = Control / electrical line
- = 6" pvc – vent line
- = 150# flanged ball valve
- = Check valve
- = Centrifical Pump
- = Diaphram Pump
- = Blower
- = Basket filter/screen
- = Ohmart/VEGA Guided wave level transmitter
- = Ohmart/VEGA Vibrating level switch
- = 3" petroleum grade "flex" hose
- = Pump shutoff on vibrating switch activation

Note: cleanout / blind flanges not shown

Tanker/drum Unloading

TANK 5

TANK 6

Tank/process Schedule

Tank #1 – 23,000 gallon CS – Organic/oil
Tank #2 – 23,000 gallon CS – Organic/oil
Tank #3 – 23,000 gallon CS – Organic/oil
Tank #4 – 23,000 gallon CS – Metal Bearing
Tank B – 10,000 gallon fiberglass – Metal
Carbon units – 15,000 lb & 8,000 lb rated at 150 gpm
Sandfilter system – rated at 150 gpm
Filtrate tank – 6,000 gal fiberglass
Lime tank – 300 gallon plastic
Weir #1 – 3" trapezoidal – 550 gpm max Organic/Oil bearing discharge point
Weir #2 – 3" trapezoidal – 550 gpm max Metal bearing discharge point
Filterpress – JWI, 100 ft3 @ 100 PSI

Prepcoat

Lime

Filterpress

Filtrate Tank

Sand Filters

Carbon

Carbon

Weir #1

Weir #2

Charlotte POTW Discharge line

To A

Carbon

Carbon

Thermal Stripper

Product Tank

Condensate Knock-out

Condenser

Vacuum System

From B

Air Stripper

Heat Exchanger

Condenser

TANK 1

TANK 2

TANK 3

TANK 4

Tank B

From A

Roll Loading

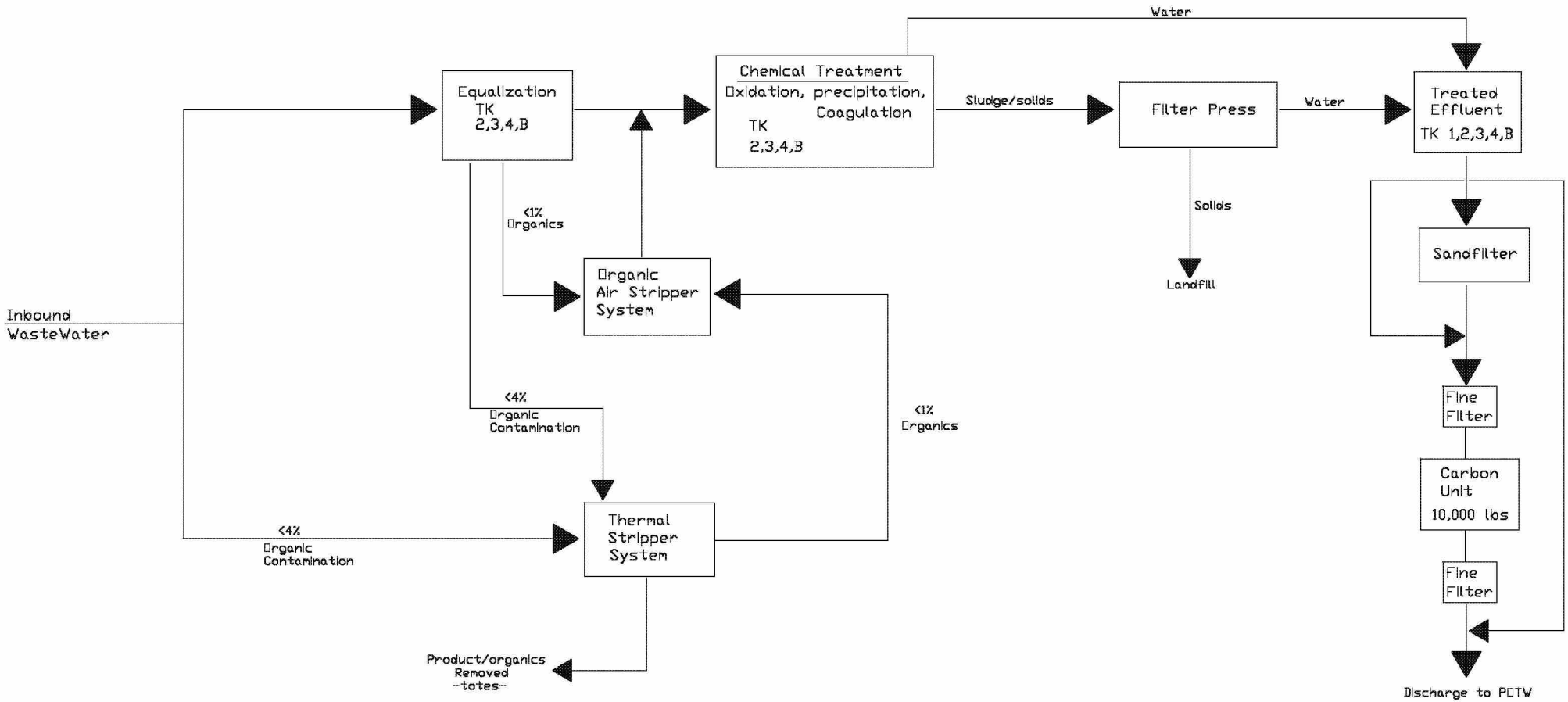
Tanker Unloading

Drum Area

Vented to atmosphere

ED_002099_0010525-00001

DART - WasteWater Treatment Flow Diagram



Agenda – June 20, 2017

The following issues will be discussed:

1. **Call Schedule and Participants List**
   Frank Behan (EPA/ORCR; behan.frank@epa.gov; 703-308-8476)

2. **Facilities with Thermal Desorption Units (TDUs) followed by Condensers**
   Mike Galbraith (EPA/ORCR; galbraith.mike@epa.gov; 703-605-0567)

   Headquarters has been receiving inquiries about facilities that utilize thermal desorption units (TDUs) followed by condensers to recover, for example, hazardous waste-derived fuels, exempt used oil fuel or petroleum refinery inputs, or other exempt products (e.g., degreasers). Below is a list of facilities that we know of that may utilize TDUs and condensers. We would like to know if regions/states know of other facilities that take hazardous waste for processing in TDU's where the volatilized gases are subsequently routed thru condensers to produce some type of product. For purposes of this inquiry, it does not matter if the TDU's/condensers or subsequent pollution control equipment were determined to need a RCRA treatment permit.
   - TDX/US Ecology (Robstown, TX)
   - Rineco - closed - (Benton, AK)
   - Chemical Waste Management (Oregon)
   - Chemical Waste Management (Sulphur, LA)
   - Clean Harbors (Region 6?)
   - Thermaldyne (LA)
   - Tradebe (East Chicago)
   - Elcon Recycling (PA)
   - Philips66 (exempt per 40 CFR 261.4(a)(12)(i) ? - Region 6)
   - Marathon (exempt per 40 CFR 261.4(a)(12)(i) ? -Region 6)
   - Shell (exempt per 40 CFR 261.4(a)(12)(i) ? - Region 6)

3. **BIF PM and Non-Mercury Metals Emission Controls for a Boiler**
   Katherine O'Neal (NC DEQ; Katherine.oneal@ncdenr.gov; 919-707-8209)

   A facility in North Carolina could not meet the hazardous waste MACT standard for their new boiler and is pursuing a RCRA permit and must conduct a risk assessment. They assert in their most recent Class 3 modification submittal that they meet the Adjusted Tier I standards and only need to meet the operating requirements in 40 CFR 266.102(e)(4) which include:
   - Total feed rate of each metal to the boiler
   - Total feed rate of each hazardous waste

- An appropriate sampling and analysis program.

They did correctly determine the Adjusted Tier I limits for boiler #7 and they can meet the Adjusted Tier I feed rate limits per the rules for each metal.

However, they need to depend on the APCE and system removal to meet the emission rates modeled in the risk assessment. That is, the risk based feed rate limits depend on the SRE and site specific air modeling.

My question is: Does the facility officially need to meet Adjusted Tier I operating limits or the Tier III operating limits in 40 CFR 266.102?

I asked Region 4 this question last year and they agree the facility should meet Tier III standards. The facility has been told this, yet has gone back to claiming they should only be required to be Adjusted Tier I and only meet those operating standards. They have an issue with some of the Tier III operating standards and don't think they should be required to provide those specific limits.

I would like to know if there was a similar situation in the past and if anyone knows of policy decisions or preamble discussions addressing whether a facility is Tier IA or Tier III when they need the APCE to meet risk based limits.

4. **Additional Regional/State Issues**

Agenda – June 20, 2017

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I would like to know if there was a similar situation in the past and if anyone knows of policy decisions or preamble discussions addressing whether a facility is Tier IA or Tier III when they need the APCE to meet risk based limits.

4. **Additional Regional/State Issues**

Appointment

From: Galbraith, Michael [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0ABF7F5C1A5E462E8096CB58EF9757EB-MGALBRAI]
Sent: 11/7/2017 2:56:23 PM
To: Valdez, Heather [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=eb323347294d44009a369c3576798bdf-Valdez, Heather]; Knittel, Janette [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a955f914e8d34cb19b6f63ac60707d32-Knittel, Janette]; Davies, Lynne [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=169eb6cbdebb4caf85f76390b8ab2674-LDavie12]; Gerhard, Sasha [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=409f48684eb4422cb13177fc9702d0fa-Gerhard, Sasha]
CC: Behan, Frank [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=b37b3a6d67644ad3bf5717d99610941e-FBEHAN]; Atagi, Tracy [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=ebcfd670077440dfb63a691749f20af2-TATAGI]
BCC: DCRoomPYS6874/DC-Potomac-Yard-South-ORCR [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=user69b5f6bd]

Subject: fun with tdus
Location: DCRoomPYS6874/DC-Potomac-Yard-South-ORCR

Start: 11/14/2017 5:00:00 PM
End: 11/14/2017 6:00:00 PM
Show Time As: Tentative

Discussion between HQ and R10 on latest regarding tradebe tdu issue; CWM status; and path forward.

Conference line to be provided later.

Message

From: Galbraith, Michael [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0ABF7F5C1A5E462E8096CB58EF9757EB-MGALBRAI]
Sent: 9/28/2017 11:08:46 AM
To: Tita LaGrimas [Tita.LaGrimas@tradebe.com]
Subject: RE: Possible meeting days/times

Hi Tita – got your voicemail. Yes, we are on for today at 10. Call or email me if you have any questions.

Mike Galbraith
Permits Branch (5303P)
Program Implementation/Information Division
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

(703) 605-0567

Appointment

From: Galbraith, Michael [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0ABF7F5C1A5E462E8096CB58EF9757EB-MGALBRAI]
Sent: 9/11/2017 1:51:12 PM
To: Johnson, Barnes [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=C39E9338CBF04DC3B4B29F78E5213303-JOHNSON, BARNES]

Subject: Accepted: TDU Discussion with ETC
Location: DCRoomPYS6100Projector/DC-Potomac-Yard-South-ORCR

Start: 9/14/2017 3:00:00 PM
End: 9/14/2017 4:00:00 PM

Recurrence: (none)

Message

From: Galbraith, Michael [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=0ABF7F5C1A5E462E8096CB58EF9757EB-MGALBRAI]
Sent: 9/1/2017 3:31:16 PM
To: Tita LaGrimas [Tita.LaGrimas@tradebe.com]
Subject: Re: Possible meeting days/times

thanks! Have you folks ever been to our office? We are not in downtown dc, but rather in crystal city (Arlington Virginia) across the river from dc.

Building is called: One Potomac Yard (South)
Address: 2777 Crystal Drive, Arlington, VA 22202

We currently have room 6100 reserved. When you get here i'll have to check you in - you can call me from the guard desk (605-0567).

Mike Galbraith
Permits Branch (5303P)
Program Implementation/Information Division
Office of Resource Conservation and Recovery
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

From: Tita LaGrimas <Tita.LaGrimas@tradebe.com>
Sent: Friday, September 1, 2017 10:01 AM
To: Galbraith, Michael
Subject: RE: Possible meeting days/times

I almost forgot! Most importantly HAVE A AWESOM VACATION!!!

Tita LaGrimas
Executive VP of Regulatory Affairs
Tradebe Environmental Services, LLC

1433 E 83rd Ave, Suite 200
Merrillville, IN 46410 United States
Office: +1 (219) 354-2352
www.tradebeusa.com

Tradebe USA

www.tradebeusa.com

Tradebe Environmental Services, LLC, an international leader in waste reclamation and recycling solutions, completed the purchase of Badger Disposal of WI, Inc ...

From: Tita LaGrimas
Sent: Friday, September 01, 2017 8:55 AM
To: 'Galbraith, Michael'
Subject: RE: Possible meeting days/times

Good morning Mr. Galbraith!

Sergio and the Team confirmed September 28, 2017 at 10:00 to 11:30 EST for our meeting.
Regarding attendance, I defer to your wisdom and knowledge Sir, hoping we meet additional members of USEPA's Team that is reviewing ETC's comments and taking part in the decision of SDS's future.
Thank you so much for this opportunity.
Respectfully,
Tita

Tita LaGrimas
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TRADEBE

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From: Galbraith, Michael [mailto:Galbraith.Michael@epa.gov]
Sent: Thursday, August 31, 2017 2:07 PM
To: Tita LaGrimas
Subject: RE: Possible meeting days/times

No worries. FYI – I'm working tomorrow (from home) and then I'm on vacation all next week

Mike Galbraith
Permits Branch (5303P)
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U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

(703) 605-0567

From: Tita LaGrimas [mailto:Tita.LaGrimas@tradebe.com]
Sent: Thursday, August 31, 2017 2:32 PM
To: Galbraith, Michael <Galbraith.Michael@epa.gov>
Subject: Re: Possible meeting days/times

Hi Mr. Galbraith!

I apologize for the delayed response I just let a meeting and will respond when I arrive at office.
Thank you for understanding.
Respectfully,
Tita

Sent from my iPhone

On Aug 31, 2017, at 11:08 AM, Galbraith, Michael <Galbraith.Michael@epa.gov> wrote:

> Hi Tita. I checked our calendars. Some possible days and times that work for us are provided below. It's usually harder to schedule meetings on Mondays and Fridays, but if that's the only days you can come in let me know, most of us can adjust our schedules.
>
> We were thinking about limiting this meeting to staff and first line supervisors on our end (and if other supervisors wanted to attend and they were available we'd recommend they sit in time permitting). If we were bump this up to higher management levels it could be harder to schedule and we wouldn't necessarily be able to get into the level of technical detail in our discussions that I think we need to. If that is not what you were envisioning let me know (we'll adjust to whatever you think is best).
>
> Possible days and times:
> Sept 19, 11:30-1; Sept 20, 12:30-2:00; Sept 21, 12:00-1:30
> Sept 26, 12-1:30; Sept 28, 10-1130
>
> Mike Galbraith
> Permits Branch (5303P)
> Program Implementation/Information Division
> Office of Resource Conservation and Recovery
> U.S. Environmental Protection Agency
> 1200 Pennsylvania Avenue, NW
> Washington, DC 20460
>
> (703) 605-0567